





ARCHITECTURAL PROGRAM UBATC-USU CLASSROOM / SHOP BUILDING VERNAL, UTAH

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# 1.0 INTRODUCTION

# Executive Summary

To allow further growth of local Uintah Basin Technical training and to help alleviate crowded and unsuitable conditions at the existing USU building on main street and replace the existing metal buildings on the UBATC campus adjacent to Uintah High School, a new Classroom / Industrial Shop Building is proposed to be built on the Vernal UBATC property adjacent to the existing UBATC Administration Building. This new building will also provide further educational services to those who currently commute to Roosevelt or those who are unable to commute. The proximity to the high school will also enhance the vocational education taught through the district and ensure that the enrollment at the new facility will continue to grow. The additional training provided will increase the region's ability to train its residents and fill positions in the growing industrial sector.

The new Classroom / Shop Building will provide 74,000 square feet of much needed, improved instructional and support space and a more user friendly student / community facility. The new building will include curriculum space for Health, Computers, Drafting/CADD, Chemistry, Biology, Food Services, Heavy Equipment Maintenance and Operation, Petroleum Technology, Welding and Building Trades. By consolidating overlapping requirements and designing flexible space, the community benefits from this educational facility being funded by the local community and the State of Utah.

# Space Summary

Allied Health

Space Requirements for the new UBATC - USU Classroom / Shop Building are:

5,350

2,638

# Classroom Component:

Business/IT/Testing	9,373
Custom Fit	2,054
IT Admin & Server	780
Sub-total UBATC	17,556 s.f.
Life Sciences	7,829
Faculty Offices	1,560
Distance Learning Studio	1,685
Sub-total USU	11,073 s.f.
Sub-total USU  Multi-use classrooms	<b>11,073</b> s.f. 4,576
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Multi-use classrooms	4,576
Multi-use classrooms Culinary Arts	4,576 2,036
Multi-use classrooms Culinary Arts Media Resource	4,576 2,036 6,630

# Sub-Total Classroom Component 48,150 s.f.

# **Shop Conponent**

Support Spaces

Heavy Equipment	8,653
Welding	7,576
Industrial Safety	2,724
Petroleum Technology	3,641
Building Trades	2,340
Support	996
Sub-total Shop Conponent	25,930 s.f.

#### Probable Construction Cost

Based on the information presented in this facility program for the construction of a new UBATC/USU Classroom / Shop Building within the schedule described, the probable total construction cost of the new building is \$11,473,231. The total construction cost for the Classroom Component is \$7,514,495 at \$156.07 per square foot. The total construction cost for the shop Component is \$3,958,736 at \$130.21 per square foot. Including soft costs the total for the Classroom Component is \$9,453,485 and total for the Shop Component is \$5,002,929. The total project cost is \$14,456,414

#### Project Schedule

The schedule for the project has architectural design beginning in May 2006 with construction documents being completed by February 2007. Contractor bidding will begin in March 2007 and the new facility will be ready for move in by July 2008.

# Additional Funding Source Secured.

Uintah County and the city of Vernal are committed to the development of educational and training resources that will further facilitate the economic growth in the area.

Through their combined resources, a grant has been offered by Vernal City and Uintah County that will be funded by July 2006 in the amount up to \$4,500,000.

## **UBATC** - Mission Statement

The mission of Uintah Basin Applied Technology College (UBATC) is to provide flexible technology and skilled training in order to encourage individual and employer growth in partnership with the communities we serve.



The need for technical training in the workforce is greater today than it has ever been. In this new century, 65% of Utah's jobs require high-tech skills. UBATC offers a variety of technical training programs that keep pace with today's rapid advances in technology. Our competency-based education system allows you to learn and progress at a rate comfortable to you. On completion you will be prepared to meet the challenges of jobs seeking these high-tech skills.

As a student, you will notice that everything we are doing at our campus centers around you, the student, in helping you with your occupational training. Our wide range of programs will help you succeed in today's high-tech industries. Our programs have been designed with input from our advisory committees to ensure that the training you receive is up to date and in demand by local employers.

#### USU - Mission Statement

The mission of Utah State University (USU) is to be one of the nation's premier student-centered land-grant and spacegrant universities by fostering the principle that academics come first, by cultivating diversity of thought and culture, and by serving the public through learning, discovery, and engagement.

# Utah State University's 10 Goals

- 1. Enhance the reputation of the University for learning, discovery, and engagement.
- 2. Expand and diversify the revenues of the University.
- Adopt new business models that embrace accountability, responsiveness, and efficiency, and a budget process that is responsive to University goals.
- 4. Strengthen the recruitment, retention, graduation, and placement of students and, as part of that goal, reduce the student-faculty ratio.
- 5. Raise the base level of compensation for faculty and staff to be more competitive with peer institutions, and reward especially outstanding faculty and staff achievements.
- 6. Build a socially and intellectually vibrant campus community, enhanced by the diversity of its faculty, staff, and students.
- 7. Infuse new energy into graduate programs, particularly at the doctoral level.
- 8. Foster new partnerships, both internally and externally.
- 9. Communicate the success of the University to the world.
- 10. Launch and complete a successful comprehensive campaign in support of the other nine goals generally and establish the central proposition that, at Utah State, academics come first.

# History - UBATC

The creation of the Uintah Basin Area Vocational Center was authorized in 1967. A \$100,000 Federal Vocational Grant was matched by Duchesne County to establish a center for adult and high school vocational and technical education at a time when the Central Utah Project was just getting started and the Bluebell oil field was coming into production. George Thatcher was the first director of the Center as well as the part-time electronic instructor. Duchesne and Uintah School Districts as well as the Ute Tribe funded the original building, located on the Union High School campus. The school districts operated the Center during these early years.

In 1972, the Utah Legislature put all three existing Area Vocational Centers (Sevier, Uintah Basin, and Bridgerland) directly under the State Board for Vocational Education. A local governing board was appointed consisting of members from Duchesne, Uintah, and Daggett County School Boards. During that same year plans were developed for a new, larger building so that the Center could serve both adult and high school students. Property was jointly donated by Uintah and Duchesne School Districts for a facility that would serve multi-district needs, and ground was broken at the present Roosevelt site, November 7, 1975. The funding for the campus came from a bill that funded a new wing to the University of Utah Medical Center. A majority of the funding went to the University but it included a line item for the construction of the new campus in Roosevelt.

Effective July 1, 1990, the name of the Center was Changed by the Utah State Legislature to the Uintah Basin Applied Technology Center to more accurately reflect the purpose and philosophy of the Center in this modern technological age.

In Sept. 2002 Utah Legislators created not only a name change from Center" to College, but also the distinction of providing our future technology students with the opportunity of obtaining an associate degree in their field of study.

#### Project Justifications

It has been the policy of the UBATC and community to join forces and incorporate the needs of the community into new construction. Uintah Basin ATC, as mandated by its mission as an area vocational center, is to provide job skills training for secondary students and post high school students, and trained manpower for business and industrial employers.

Restricted facility use has begun to affect the relationship of the UBATC with the community. Enrollment has no longer been able to grow at the rate of community interest, but instead has been limited by building size. Presently, all departments operate above prototypical staffing levels to accommodate enrollment, resulting in overcrowding and a lack of instructional and storage space.

State funding, appropriated by the legislature, will help finance the new construction which will enhance vocational training.

It is also important to note that UBATC serves an area which includes Uintah and Daggett. The new building will house production facilities to provide these services to the surrounding areas.

The Vernal facility for UBATC/USU will be a critical new building in the Uintah Basin. As past experience has proven, the rural demographic and geographic factors indicate that this new educational facility would become a "crown jewel" in the community. In smaller communities, the educational facilities become pivotal learning centers, and much of the economic growth and expansion of new industry are hinged on the educational opportunities available to the populace.

## History- Uintah Basin USU

The USU - Vernal building was purchased by the community and donated to the University in the 80's. The University has been the longest resident. However, the building is not designed to house a university. The chemistry and biology labs were only intended to be temporary operations that now need to be upgraded. The building has undergone a few face-lifts, but is not adquate for our science and research needs.

The current USU facilities in Vernal are at capacity, thereby restricting course offerings and growth. There are over 120 natural resource degree trained professionals in the Veranl area that need to receive training, and for which USU trains replacements. Moreover, because of limited research space, faculty are restricted in the number of exteranlly funded research projects but USU is not able to accommodate their needs due to lack of space and updated equipment.

USU reports a growth rate of 88% over the last five years indicating a high interest in the Uintah Basin for degree programs in Natural Resources fields because of the high number of natural resource type agencies in that part of the state. The Facility will also facilitate growth in USU's research in natural resources.

The new facility for UBATC-USU in Vernal will be a premier facility in the Uintah Basin. As past experience has proven, the rural demographic and geographic factors indicated that this new educational facility would become a "crown jewel" in the community. In smaller communities, the educational facilities become educational opportunities available to the populace.



# UBATC+USU CLASSROOM / SHOP BUILDING - VERNAL, UTAH SITE PLAN





# Site Analysis

#### Visual Surveying and Analysis

Currently, the existing USU Uintah Basin building on Vernal's Main street together with the UBATC administration building do not meet the needs of the growing enrollment in Vernal and surrounding communities. Furthermore, the existing USU extension building was purchased as a temporary facility and the majority of the UBATC classrooms are located in mobile classrooms.

The USU Extension Building was initially an office building and was not designed for the specific requirements of departments such as Chemistry, Biology, and others. And the space does not adequately meet the needs of the faculty for office space, media resources and a work room nor does it serve the needs for distance learning, an important aspect of the facility.

The classes currently held in the UBATC mobile classrooms are mostly computer related and internal climate control is important. Due to temperature differences between summer and winter these spaces are not energy efficient and are often too cold or too hot. The existing UBATC Administration Building also houses classrooms that do not adequately meet the needs of the department and are in many instances too small or too few for the increasing enrollment.

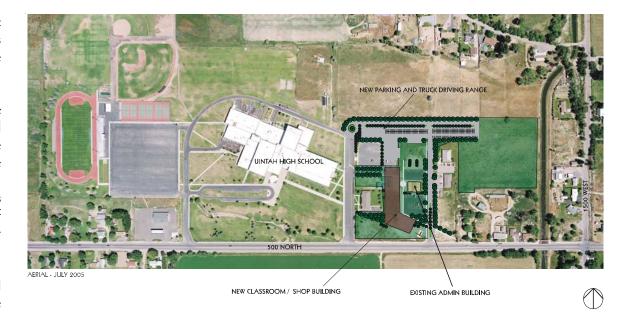
The proposed location for the new UBATC / USU Building is on 13.5 acres of existing land owned by the UBATC and the Uintah County School District. The school district will be donating its land for construction of the new building in exchange for the partial use of the new facility. The site is adjacent to the existing Uintah High School, LDS Seminary Building and the existing

UBATC Administration Building and Classroom Buildings. This site in proximity to the high school is much more favorable than the present location of the USU Uintah Basin.

Access to the site is from 500 North Street which is State Highway 121 onto 1700 West Street where the UBATC buildings are located as well as two professional offices. There is additional access from 1800 West that also serves the high school and seminary buildings.

Future access to the site and to future building could come from 1500 West at about 650 North. This road could then connect to the existing 'round-about' at the north end of 1800 West.

The site slopes up just slightly to the north and is currently open fields. The 1700 West Street ends in a cul-desac which will used in part in the master planning of the



# UBATC+USU CLASSROOM / SHOP BUILDING - VERNAL, UTAH SITE PLAN







# SITE PLAN - DETAIL

Drainage toward the southwest into the area of new construction and parking will need to be addressed.

# Orientation

The sites of new construction are along the west side of the property: the classroom building and new parking in the southwest corner; and the shop building and new paved truck driving and loading area in the northwest corner. Long range planning could include an access from 1500 West that leads into a loop type layout with the building organized along the loop and a landscaped area in the center.

The new classroom / shop building will be south of the existing UBATC building between 500 North, the existing seminary building and the UBATC parking lot. The parking lot can also serve the new classroom building and an additional parking area should be created on the southwest side of the new building. The new parking location will also serve a service entrance which is in close proximity to the kitchen and science areas. Being the closest to the entrance from 500 North, the classroom building will also serve as a campus icon for visibility. It is also proposed that the classroom component relate to the orientation of the existing high school campus. Entrances into the new building should relate to

current pathways to and from the high school and UBATC building. The views to the south across State Highway 121 overlooking the open farmland should be recognized.

The shop component will house such departments as the diesel maintenance and truck driver training as well as welding, building trades, petroleum technology, and industrial safety. Most of these functions require direct access through an overhead door to a paved apron or work area. The truck driver training requires the largest exterior paved area which can be dually used as the apron for the maintenance garage. The truck driver training area should also be adjacent to an access road so that a truck could drive in from one street and out to another. The truck access road however, should be separate from the main campus roads. The proposed connection from 1500 West at 650 North to the 1800 West 'round-about' would provide this access. A new parking area should be built east of the driver training area to accommodate the students parking for the new building.

Currently, the existing UBATC Administration Building houses the Allied Health classes as well as Industrial Safety courses and Custom Fit training. These functions could be moved into the new buildings allowing the Admin. Building to focus on student orientation, counseling, and other UBATC administrative purposes.

Pedestrian circulation from the high school to the new building and parking should take place through a corridor that has already been established near the existing mobile units and parking lot. This corridor would then roughly align with the new building and the Admin.

The new Classroom / Shop Buildingwill be the first college type building built on the site and therefore will be setting a precedent for this type of building. With the size and visibility of the classroom building it will be important that it serve as an example, both in terms or architectural style and a reflection of future standards in educational excellence.

#### Climate

Located in north eastern Utah, Vernal lies in a semi-arid, high desert region. At 5259 ft. above sea level, Vernal is located within the Uintah Basin region of the Green river drainage. With large temperature variations between seasons, winters tend to be very cold with a mean temperature below 10 degrees for three months. Summers are warm, with a mean temperature for three months in the high 80's but have been as hot as 100 degrees. The prevailing winter winds are from the northwest and the frontal wind exposure is typically from the southwest. In response to the campus master plan the architectural team should take into consideration the high desert climate in the incorporation of landscape materials and protection against excessive solar gain and extreme winter winds.

# Site Function & Relationships

Siting the new Classroom Building adjacent to 500 North, the existing UBATC Building and to the existing high school will identify it as a prominent architectural element.

The new facility will serve both the local community, the extended Uintah Basin area as well as the high school. It is therefore necessary to design the building to be multisided, welcoming all users from the new facility the existing high school, and the community. Landscaped and architectural spaces should welcome users and shelter them from harsh climatic conditions.

The new Classroom / Shop Buildings will set the standard for design and materials for any future buildings. The existing UBATC Building was not designed as a part of a master planned campus and does not provide a suitable standard of design for the larger scale of buildings to be built now and in the future although, the brick color used on the building may be considered for new construction. It should be noted however that the existing building could be renovated to match a new standard or if the location of the existing building becomes prohibitive to an efficient master plan the building could be removed and it's functions moved to new buildings.

# Independent Testing and Surveying

A comprehensive land survey to determine the exact location of utility lines to the existing UBATC Building and adjacent businesses and through the site of new construction will be required in the future.

A comprehensive geotechnical investigation will also need to be completed to address issues concerning fault lines, geotechnical structure and Level 1 environmental assessment. Additionally the State Archeologist has requested an Archeological survey be conducted to reveal any archeological concerns that might exist on site. Drainage on the site is from the northeast to the southwest.

#### Site Access

It is the objective of the programming team to anticipate future expansion of the campus and accommodate new construction by allowing areas for additional parking lots and access roads. As stated the Classroom / Shop Building should be located on 500 North between 1700 and 1800 West for visual presence and ease of access from both streets.

The Shop Component will be located north of the Classroom Component. The vehicle traffic related to the shop component will include large industrial and construction trucks and tractor trailers and therefore should be separated from the small vehicular traffic and pedestrian flow to and from the Classroom Component.

The proposed road from 1500 West at the rear of the property will complete a 'loop' access from the roundabout at 1800 West to 1500 West. This will accommodate tractor trailers that will be unable to turn around in the parking area or back out. This new street will also allow access for additional parking and future building construction activities that may occur in an east west orientation along this corridor.

Most student and faculty pedestrian access to the new Classroom /ShopBuilding will be from the existing parking adjacent to the existing UBATC Building and from the proposed parking to the west of the Building. Pedestrian traffic will also occur from the high school to the Classroom /Shop Building. Because of potential conflicts between vehicular and pedestrian traffic along 1800 West it is recommended that a singular, defined pedestrian corridor be created from the high school to a central area between the new Classroom Component and the Shop Component just north of the existing LDS Seminary Building. This will

allow easy access to the Classroom / Shop building and existing Admin. Building and their associated parking from a walk way across 1800 West.

All perimeter sidewalks, roads and surface parking areas should be accessible to disabled persons in accordance with the American Disabilities Act (ADA): curb-cuts, ramps and parking for disabled persons being of utmost importance. Security to lighting needs to be addressed in the site, with a minimum of 5 foot candles, set on photocell switches, in paved lots. At present, there is no public transportation to the site, with the exception of school and tour buses.

# Fire Vehicle Access

Construction of the proposed north road will be required to allow fire vehicle access to the north side of the Shop Component and all other future developments on this side of the property. The existing cul-de-sac at the end of 1700 West also needs to remain for fire vehicle access for the east side of the new facility. Fire safety codes require a 20'-0" access road with 13'-6" clearance above.

# 3.0 FACILITY ANALYSIS

# Facility Analysis

#### General

To allow further growth of local Uintah Basin Technical training and to help alleviate crowded and unsuitable conditions at the existing USU extension building on main street and replace the existing metal buildings on the UBATC property, a new building will be constructed to the east of Uintah High School. Currently, much of the existing vocational training takes place in Roosevelt, but many of the students live in Vernal. Because of the growth occurring in and around Vernal and because of the inability of many residents to commute to Roosevelt it will be necessary to provide a training and teaching facility in Vernal. The property adjacent to the high school owned by the UBATC will accommodate both the immediate needs as well as construction of future buildings and campus as needed. The design of the new facility will need to reflect both the literal and figurative connections with the high school as well as provide a new focal point that is reflective of the region and community needs. The entrance to the new facility needs to be inviting to the community as well as corresponding somewhat to existing access patterns. Parking for the new buildings should support new the facility as well as future buildings.

State funding, appropriated though the state legislature, will help finance the new UBATC+USU Classroom / Shop Building. Additional funding from Vernal City will help finance the Industrial and Building Trades Shop. The new facility will enhance technical training and support ATC and USU students and faculty.

#### New Construction

Architectural design shall follow the DFCM Design Process and Design Requirements Guidelines dated May 25, 2005.

The new Classroom / Shop Building will house the departments of Science (USU), Culinary Arts, Computers, Allied Health, Custom Fit, Distance Learning, as well as tiered and Multi-use classrooms. It will also house a media resource center and USU faculty offices. The entrance to the classroom building will be 2 stories and serve as a gathering and display place and be adjacent to the food service area. The commons areas will be good places for faculty/student interaction as well as being able to accommodate group activities and eating. Windows and doors to patios to the southwest will bring light and views to the gathering place. A service entrance and parking area will be located on the west side of the building adjacent to the kitchen and science areas. The main entrance will be across from the existing UBATC Admin. Building on the south end of the existing parking lot.

# Landscaping

Landscape design should provide adequate pedestrian access from the existing and new parking areas to the new building as well as to the high school. The design should also aid in the development of future pathways according to the master plan. All materials selected should be suitable for this climate. Consideration should be given for low water and low maintenance vegetation. A complete automatic underground sprinkler system shall be installed.

# Exterior Signage

Provide site signage to indicate no parking areas, parking for persons with disabilities, visitor parking, student and faculty parking, service entries, drop off zones and other special directional requirements. Use DOT standard symbols. Provide suitable building identification at the building as well as at the street. Consideration should also be made to provide directional signage at 1500 West and on Main Street.

## Finishes and Standard Requirements

Architectural standards for details, finishes, hardware, and building systems should be coordinated with the Roosevelt UBATC. Standards such as 80% minimum light reflectance for walls and ceilings should be followed. Items such as glass covered bulletin boards, trash containers, public telephones and outdoor smoking areas should be provided in accordance with current UBATC and USU standards.

Carpet: All areas to receive carpet should use antistatic carpet which conforms to campus standards. The State carpet contract should be used if possible.

Resilient floor coverings: Provide resilient floor coverings in all storage areas, utility areas, stairways and public areas. Floor finishes shall have a light reflectance of 20%.

Ceramic tile: Restrooms shall have ceramic tile floors and wainscots to 48". Coordinate tile wainscot with bathroom fixture locations.

Administrative offices and conference rooms should have upgraded finishes to convey a businesslike atmosphere for visitors from the community which support activities and curriculum on campus.

Signage: Provide a building directory and signs to direct visitors, designate room numbers and identify staff work areas. Interior signs shall be metal frames with tactile interchangeable sign faces and comply with accessibility requirements.

Whiteboards & tack boards: Whiteboards and tack boards shall be provided where shown on the space diagrams and in all areas where computers are used. Generally, whiteboards and tack boards will be 5'-0" high, with length as indicated by individual diagrams.

#### Support Spaces

The following support and service areas are to be provided in the new building:

- Restrooms
- Custodial closets
- Main mechanical room
- Main electrical room

- Telecommunications/DataRoom: Central incoming telephone/communications, main clock and alarm system room with data control /distribution system.
- Electronics Distribution Rooms
- An adequately sized, secure storage room for stock of building supplies, this can be jointly located with a central custodial supply room.

#### <u>Acoustical</u>

Ceilings: Suspended grid (intermediate duty or heavier with appropriate fire rating) and panel system. Acoustical panels shall have a minimum NRC rating of .75, with pattern, surface and color as selected by Architect. Fixed offices and conference rooms will receive construction measures to assure confidentiality as necessary.

Such measures may include, but are not limited to: Full height walls at perimeter, up to and sealed air tight to the structure above.

Proper treatment of wall and ceiling penetra-tions and sound blankets over top of ceiling.

Acoustically lined or acoustically trapped air ducts, both supply and return systems.

#### Noise Isolation Classes:

Between adjacent classrooms:	NIC 50
Between classrooms and corridors	NIC 45
Between restrooms and other spaces	NIC 48
Between private offices or conference room	S
and other spaces:	NIC 48
Between storage and other spaces	NIC 30

It is important that the entire system (ceiling, floor, duct, doors, etc.) be analyzed, and not just the walls.

The HVAC system will be designed so as not to produce excessive noise in any of the occupied areas of the building.

This will be defined as follows:

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General Open Office Spaces	NC-38 Max.
Classrooms, Conference Rooms and	
Private Office Areas	NC-35 Max.
Study Halls, Media and other	
Low Noise Areas	NC-30 Max.

#### Furniture Systems

Furniture for the new Classroom and Shop Buildings should be functional with durable surfaces. Whenever possible the State Contract for furniture should be utilized. Furniture systems will contribute to the working environment by providing task lighting, acoustical control, disabled person access and support for computer systems. It is desirable that all furniture systems be adaptable to meet the needs of persons with disabilities through adjustable work surfaces or the rearrangement of components.

#### Electrical

Provide 4 - 6" conduits from classrom building to shop building for data and future connections.

#### Slte Mechanical

#### Sewer

A new sanitary sewer line shall serve the new buildings and connect into the existing sewer line running east and west along 500 North. Vernal City codes must be followed as the system will drain into the city sanitary sewer system.

#### Water

The new water source shall connect to the culinary water system located along 1700 West. The approximate size of the new water supply is 2 inch. Metallic piping shall not be buried in this area. Approved piping materials shall be plastic or wrapped type K copper.

#### Storm Drainage

Rainwater drainage shall be coordinated with the existing rainwater drainage collection system. A suitable collection system shall be provided for the new building.

#### Gas

The area has natural gas available along 1700 West which can be extended to the new building.

# Fire Sprinklers

The buildings shall be fully sprinkled with a wet pipe sprinkler system, using fire line water. Fire hydrants with extended fire lines will also be required.

#### Building Mechanical Systems

Mechanical design shall follow the DFCM Design rocess and Design Requirements Guidelines dated May 25, 2005.

The mechanical systems shall be designed to meet the specific needs of each individual room or zone relative to the size of the room, its occupants, temperature, humidity and ventilation needs. The outside design temperatures shall be selected from the values of the local summer and winter climatological data. The HVAC systems shall be comprised of a combination of VAV (variable air volume) air handling units with re-heat boxes and constant volume air handling units. Heating and cooling fan coil units shall also be utilized in the design.

Heating shall consist of a two pipe direct return hot water system. Cooling shall consist of a two pipe direct return chilled water system with secondary coil pumps.

# Ventilation Requirements

Dedicated outside air shall be provided as ventilation air to VAV air handling units. This will provide required outside air even when the supply of circulatory air is reduced by the VAV system.

# Interior Environmental Conditions

Epidemiological studies have shown a decrease in absenteeism and respiratory infections when relative humidities are kept in the range of 25 to 50%. Low relative humidity results in eye irritation and complaints of nose and throat discomfort.

#### Relief Air Path

The HVAC systems, introducing outside air into the circulating air system, must have a dedicated path for relief air. Exfiltration through the building envelope is not acceptable as a dedicated relief air path. All air handling systems shall have an economizer cycle for cooling when outdoor conditions permit.

All mechanical equipment shall be selected to minimize maintenance and operational costs. All equipment and piping shall be marked and color coded. The system shall be clearly annunciated to indicate when filters should be replaced, fan failure occurs and duct temperatures rise above 85 degrees or drop lower than 55 degrees F.

The system shall be designed to eliminate vibrations from entering the building. All equipment, piping, and ductwork shall be seismically braced and isolated per the 2003 IMC and SMACNA Seismic Restraint Manual, current edition.

The air shall be delivered draft free from the ceiling. The distribution in the rooms shall be designed to preclude stratification within the rooms or short circulating between the supply and return diffusers and grilles.

The contract documents shall make provisions for testing and balancing prior to occupancy. This testing period shall be long enough to demonstrate complete system performance including positive and negative air flow conditions.

Energy conservation measures shall consider the following items:

- 1. Night set-back.
- 2. Medium and high pressure supply air systems shall limit maximum duct velocities to 3,000 fpm.3. Automation. Connect to a central monitoring/control system.
- 4. Insulation.

## Kitchen Exhaust Systems

Exhaust and make-up air systems from cooking surfaces and steam producing appliances shall be designed in terms of the req-uirements of the International Mechanical Code. Stainless steel Class I compensating hoods shall be provided over grease producing cooking surfaces, and the exhaust fans shall be upblast roof mounted type meeting all code requirements. Stainless steel Class II hoods shall be provided over steam producing appliances such as dishwashers, and be exhausted with an upblast roof mounted exhaust fan. Exhaust duct-work for Class I hoods shall be contained within a two hour fire rated enclosure.

# Plumbing

The number of fixtures shall be in accord-ance with the 2003 International Building Code. Fixtures for persons with disabilities shall be as required by the IBC and the ADAAG (Americans with Disabilities Act Accessibility Guidelines). Drinking fountains shall be of the refrigerated type with at least one per floor. Each floor shall be provided with one service sink.

#### Building Electrical Systems

Electrical and design shall follow the DFCM Design Process and Design Requirements Guidelines dated May 25, 2005.

#### Codes and Standards

Codes directly applicable to design of the electrical system are the 2002 National Electrical Code, (and all NFPA codes and standards regulating design of institutional facilities), 2003 International Building Conservation. Standards of UL, the National Code, the NFPA Life Safety Code, and applicable codes of the State of Utah for Energy Electrical Manufacturer's Association, and OSHA should be incorporated in the design of the electrical systems.

# Lighting Systems

Lighting systems for the facility should maximize energy efficiency while providing adequate illumination for performance of specified tasks. Lighting levels should be in conformance with the Recommended Illuminance Categories and Illuminance Values for lighting Design. Where applicable, task lighting systems should be employed to minimize energy consumption.

Consideration should be given to multi-level and motion sensing switching systems, load shedding, and other energy reducing techniques. Energy conserving lamps and ballasts should be used where applicable. System design must conform to State Energy Codes.

Economic Comparison. Initial and life cycle costs should be compared for major system types, with

emphasis on maximizing efficacies of light sources and utilizing the most efficient luminaire suitable for the task involved. Lamps of standard manufacturers should be used as much as possible to allow ease of replacement from campus stock.

Fixture types selected for spaces requiring flexibility should be capable of simplified re- location.

Consideration should be given to lenses and uplighting systems which reduce reflected glare from CRT screens. Minimum maintained average footcandle levels for typical spaces are listed below. Deviations from these criteria may be required to accommodate individual space needs.

Space Category	Lighting Level							
Offices	70							
Study/Reading Areas	50							
Classrooms	70							
Teaching Labs	70							
Workrooms	50							
Conference Rooms	50							
Computer Rooms	50 (cont	rolled)						
Stairways	30							
Toilet Rooms	30							
Stock Rms/Equip. Storage	30							

Exterior lighting Systems. Provide exterior systems which are compatible with lighting levels and fixture types presently in use on the campus. Circuit fixtures so that a minimum amount of security illumination will be provided from late night until dawn by simplified automatic switching.

# Power Distribution

Service voltage should be 120/208 volt, 3 phase, 4 wire. Provide a watt-hour/demand meter to measure building consumption.

Service Entrance equipment may be fused or circuit breaker type depending upon analysis of fault current availability, and upon equipment maintainability and reliability.

Branch circuits should be run overhead where possible except to receptacles in exterior walls and in furred-out spaces of columns. Under floor service to interior freestanding areas (such as computer modules) should be minimized to allow for future reorganization of spaces with a minimum of difficultly.

Power factor correction should be incorpor-ated as required by energy codes; or as dictated by economic consideration of sys- tem capacity reduction.

#### Grounding

Computer ground system. A computer grounding system should be accessible to computer rooms as required to provide a "quiet" ground for computer systems.

This system shall consist of a network of grounding cables with a tap into computer areas requiring this system. The network shall terminate in a single point made-earth ground. Ground to be maintained at no greater than 2 ohms. The use of a hollow tube, chemically charged rod electrode, such as "Xit-Rod" (or equal) system is recommended.

#### Equipment ground system

This system consists of a separate ground conductor to be included in raceway with phase conductors for all branch and feeder circuits.

# Emergency Power System

Emergency power is required for life safety functions, and as back-up for commercial power to critical equipment items. Life safety functions include means of egress lighting, lighting in certain critical spaces, and power for the fire alarm system.

A diesel-driven engine generator and automatic transfer switch will provide the power source and transfer control for the system. Fuel tanks should be sized for 2 hour operation at full load.

# Telephone Systems

A system of telephone outlets, raceways, backboards, grounding, etc. will be required throughout the facility for a complete telephone system. Provide telephone service conduits as required. Coordinate with State Telecommunications for number and size of conduits required. Provide a Voice-over IP system similar to UBATC Roosevelt.

Telecommunications/Data Raceway System
Raceway system for signal cabling will be required
throughout the facility. Capacity of the system must be
adequate to meet functional requirements of initial
installation as well as future expansion of the signal cabling
system. Furniture system should also provide a wire
management system for data and telecommuni-cation wires
and equipment.

Stub out (4) 4" conduits for telecommuni-cation / data service from the facility for future extension to other campus facilities.

#### Video Network System

Video cabling will be required from the TV production control room to each classroom area. Clock System. Provide battery operated clocks in all public areas. Rooms to be used by high school students should have a bell that is integrated with the high school bell system.

#### Fire Alarm System

Provide a fire alarm sys- tem in accordance with code requirements and requirements of the Utah State Fire Marshall. In addition, provide smoke detectors in electrical and mechanical rooms, elevator equipment rooms, and other areas where appropriate. Provide reporting capability to remote location if required.

# Line Conditioning

Provide transient over voltage and "noise" protection on the service entrance and on selected panel boards in the facility which are likely to serve computer equipment. Provide capability similar to that provided by standard equipment of EFI Corporation.

# Lightning Protection System

Building vulnerability to lightning strike and damage must be studied. A lightning protection system should be included if consistent with campus policy, or warranted by reasonable susceptibility to strike. If a system is installed, it should be U.L. master labeled.

# Structural Design Criteria

Structural design shall follow the DFCM Design Process and Design Requirements Guidelines dated May 25, 2005 and the 2003 International Building Code.

Floor Loads: 100 psf live loads

Partition Loads: 20 psf

Roof Loads: 30 psf live load
Wind Loads: 90 mph exposure C.
Seismic Loads: Shall be as per International

Building Code.

Bracing of Architectural, Mechanical, and Electrical Components shall be in accordance with IBC Chapter 1621 for the project seismic design category.

# Code Analysis and Applicable Codes

Code Analysis shall follow the DFCM Design Process and Design Requirements Guidelines dated May 25, 2005 and the 2003 IBC.

# 4.0 INDIVIDUAL SPACE ANALYSIS

# **INDIVIDUAL SPACE ANALYSIS**

# Individual Space Analysis

This section contains the building program space summary which lists all of the spaces required for the new facility. It is organized into the major instructional or functional areas for the building. Detailed information regarding the contents, size and character of each space is located in each of the sub-sections that follow the space summary.

# <u>Terminology</u>

Terminology used in this program is standard terminology used by Architects. Terms such as ASF and GSF relate to square footage of spaces described in the program. ASF is Assignable Square Footage or the area a function will occupy. GSF is Gross Square Footage which includes corridor systems, wall widths, and miscellaneous support spaces such as mechanical rooms, restrooms, etc. Typically in education facilities the GSF can be derived from the ASF by using a multiplying factor. This factor is based on historical trends in education facilities and standards used by the State of Utah. The factor used in this program is 1.30 or 77% of the GSF is ASF for new construction. This is a high factor of utilization which requires extra care by the Architect to achieve the most efficient use of space.

# AFFINITY CHART

	Abv.	Department		АН	PT	В	CF	IS	ВТ	W	DS	DL	S	FO	WR	TC	ΙΤ	MR	MU	CA	ME	SE	Р	HS	
UBATC	AH	Allied Health	П		4	2	4	4	5	5	5	4	4	4	4	4	4	4	3	4	4	4	4	2	
	PT	Petroleum Tech.	П	4		5	4	2	2	2	2	5	5	5	4	5	4	5	5	5	4	1	2	2	
	В	Business-Computers	П	2	5		4	4	5	5	5	2	4	4	4	4	1	2	3	4	2	1	3	2	
	CF	Custom Fit	П	4	4	4		2	4	4	4	4	4	4	4	3	4	4	1	4	4	2	2	5	
	IS	Industrial Safety		4	2	4	2		2	2	2	5	4	4	4	4	4	4	4	4	4	2	2	2	
	ВТ	Building Trades		5	2	5	4	2		1	1	5	5	5	4	5	4	5	5	5	5	1	2	2	
	W	Welding		5	2	5	4	2	1		1	5	5	5	4	5	4	5	5	5	5	1	2	2	
	DS	Diesel Shop		5	2	5	4	2	1	1		5	5	5	4	5	4	5	5	5	5	1	2	2	
USU	DL	Distance Learning		4	5	2	4	5	5	5	5		2	3	5	5	2	4	4	5	5	5	2	2	
	S	Science Department	Ш	4	5	4	4	4	5	5	5	2		3	4	4	4	4	4	5	4	2	2	2	
	FO	Faculty Offices	Ц	4	5	4	4	4	5	5	5	3	3		1	4	2	2	2	4	5	2	2	5	
			Ш																						
JOINT	WR	Work Room	Ш	4	4	4	4	4	4	4	4	5	4	1		4	4	1	4	4	4	3	4	4	
	TC	Tiered Classroom	Ц	4	5	4	3	4	5	5	5	5	4	4	4		4	4	4	4	1	1	2	2	
	IT	IT Administrator	Ш	4	4	1	4	4	4	4	4	2	4	2	4	4		2	4	4	4	2	4	4	
	MR	Media Resource	Ц	4	5	2	4	4	5	5	5	4	4	2	1	4	2		2	2	2	2	2	4	
	MU	Multi-Use Classrms. (3)	Ш	3	5	3	1	4	5	5	5	4	4	2	4	4	4	2		1	4	4	2	4	
	CA	Culinary Arts - Kitchen		4	5	4	4	4	5	5	5	5	5	4	4	4	4	2	1		2	1	2	2	
	ME	Main Entry		4	4	2	4	4	5	5	5	5	4	5	4	1	4	2	4	2		4	1	2	
	SE	Service Entry		4	1	1	2	2	1	1	1	5	2	2	3	1	2	2	4	1	4		4	5	
	Р	Parking		4	2	3	2	2	3	2	2	2	2	2	4	2	4	2	2	2	1	4		5	
	HS	High School Link		2	2	2	5	2	2	2	2	2	2	5	4	2	4	4	4	2	2	5	5		

AFFINITY KEY

Adjacency Desired



# PROJECT SPACE LIST No. 9

# UBATC + USU NEW CLASSROOM/SHOP BUILDING - VERNAL, UTAH

GROUP N	lo. SPACE DESCRIPTION	# Occupants	Code Occupants		W	L	Total NSF	<b>FACTOR</b>	GSF
CLASS ROO	M COMPONENT								
UBATC	-1 Allied Health Lab	15	45	Т	36	62	2,232	1.30	2,902
(	-2 Allied Health Classroom	30	62		28	44	1,232	1.30	1,602
	-3 Allied Health Storage	1	2		18	25	450	1.30	585
	-4 Allied Health Office	1	1		10	12	120	1.30	156
	-5 Allied Health Assistant Office	1	1		8.5	9.5	81	1.30	105
	C-6 Computer Lab (Drafting)	22	26		40	32	1,280	1.30	1,664
	-7 Drafting Office	1	1		12	12	144	1.30	187
	C-8 Computer Lab - Business - Fixed	28	23		35	33	1,155	1.30	1,502
	C-9 Computer Lab Office	1	1		10	12	120	1.30	156
C	.10 Computer Lab - Business - Open & Lab. Assist.	28	27		41	33.5	1,374	1.30	1,786
C	11 Computer Lab Office	1	1		10	12	120	1.30	156
C	12 Computer Lab Storage	1	1		8	16	128	1.30	166
C	13 Orientation Space	10	10		10	20	200	1.30	260
C	14 Testing Area - 8 Computer / 8 Regular	10	23		14	33.5	469	1.30	610
C	15 Information Technology Lab and Classroom	24	42		42	50	2,100	1.30	2,730
С	.16 IT Admin., Server, Storage	1	3		20	30	600	1.30	780
С	17 Business Office - IT	1	1		12	10	120	1.30	156
C	18 Custom Fit Classroom	30	52		26	40	1,040	1.30	1,352
С	19 Custom Fit Storage	1	1		12	15	180	1.30	234
C	20 Custom Fit Office	1	1		10	12	120	1.30	156
C	21 Custom Fit Office	1	1		10	12	120	1.30	156
C	22 Custom Fit Office	1	1		10	12	120	1.30	156
	Subtotal UBATC - Classrooms	210	327				13,504		17,556

# INDIVIDUAL SPACE ANALYSIS

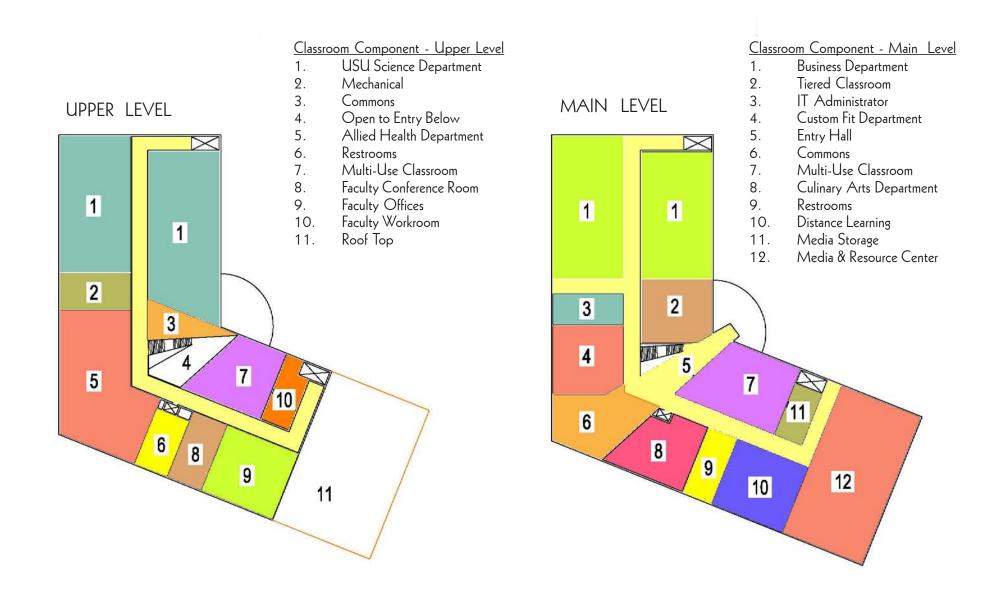
USU	U-1	Distance Learning Studio	60	65	36	36	1,296	1.30	1,685
	U-2	Life Science Lab	24	26	36	36	1,296	1.30	1,685
	U-3	General Science Lab	24	26	36	36	1,296	1.30	1,685
	U-4	Chemistry Lab	24	27	34	40	1,360	1.30	1,768
	U-5	Lab Prep & Chemical Storage	1	4	20	36	720	1.30	936
	U-6	Research Lab - Deleted				1		7.00	
	U-7	Herbarium	1	6	15	20	300	1.30	390
	U-8	Science & Equipment Storage	1	2	15	20	300	1.30	390
	U-9	Biology Storage	1	4	25	30	750	1.30	975
		Faculty Office Area, USU	10	12	10	12	1,200	1.30	1,560
		Tuesting Strikes / tiesty steel	,,,		- 10	1.2	1/200	7.00	,,,,,,
		Subtotal USU - Classrooms	146	171			8,518		11,073
oint	J-1	Multi-use Classrooms	30	60	30	40	1,200	1.30	1,560
	J-2	Multi-use Classrooms	30	60	30	40	1,200	1.30	1,560
	J-3	Break Room	10	31	25	25	625	1.30	813
	J-4	Culinary Arts	30	23	39	30	1,170	1.30	1,521
	J-5	Culinary Arts Classroom - Deleted							
	J-6	Culinary Storage	1	2	10	39.6	396	1.30	515
	J-7	Tiered Classroom	88	80	40	40	1,600	1.30	2,080
	J-8	Media Resource and Technology Center	50	102	60	85	5,100	1.30	6,630
	J-9	Multi-use Classrooms	30	56	28	40	1,120	1.30	1,456
	J-10	Multi-use Classrooms - Deleted							
	J-11	Faculty Room	24	29	24	24	576	1.30	749
		Subtotal Joint Shared Spaces - Classroom	293	443			12,987		16,883
Support	CS-1	Restroom-female ( 6 w/c's)	0	0	20	12	240	1.30	312
	CS-2	Restroom-female ( 6 w/c's)	0	0	20	12	240	1.30	312
	CS-3	Restroom-male ( 6 w/c's)	0	0	20	12	240	1.30	312
	CS-4	Restroom-male ( 6 w/c's)	0	0	20	12	240	1.30	312
	CS-5	Unisex Restroom	0	0	5	5	25	1.30	33
	CS-6	Student Commons	0	0	20	20	400	1.30	520
	CS-7	Mechanical	0	0	15	20	300	1.30	390
	CS-8	Maintenance - Storage	0	0	8	10	80	1.30	104
		Electrical Room	0	0	12	8	96	1.30	125
		IT Room	0	0	10	8	80	1.30	104
		Telephone Room	0	0	8	8	64	1.30	83
		Maintenance - Janitor	0	0	4	6	24	1.30	31
		Subtotal Support Spaces - Classroom Component					2,029		2,638
		Subtotal - Classroom Component		044			25.000		40.450
		Suototai - Ciassroom Component	649	941			35,009		48,150

# SHOP COMPONENT

U		

UBATC	S-1	Building Trades	20	36	30	60	1,800	1.30	2,340
	S-2	Petroleum Technology Lab	25	28	35	40	1,400	1.30	1,820
	S-3	Petroleum Tech Classroom	24	44	25	35	875	1.30	1,138
	S-4	Petroleum Tech. Storage	0	0	15	35	525	1.30	683
	S-5	Industrial Safety	40	92	42	44	1,848	1.30	2,402
	S-6	Industrial Safety Storage	0	0	8	16	128	1.30	166
	S-7	Industrial Safety Office	2	1	10	12	120	1.30	156
	S-8	Welding Technology Program	25	80	50	80	4,000	1.30	5,200
	S-9	Welding Classroom	25	50	28	36	1,008	1.30	1,310
	S-10	Welding Storage	0	0	20	35	700	1.30	910
	S-11	Welding Office	1	1	10	12	120	1.30	156
	S-12	Heavy Equipment and Maintenance Shop	20	100	50	100	5,000	1.30	6,500
	S-13	Heavy Equipment Shop Classroom	20	43	25	34	850	1.30	1,105
	S-14	Heavy Equipment Storage	0	0	20	25	500	1.30	650
	S-15	Truck Driver Simulator	1	9	12	15.5	186	1.30	242
	S-16	Diesel Shop Office	1	1	10	12	120	1.30	156
		Subtotal UBATC - Shops	204	486			19,180		24,934
Support	SS-1	Restroom-female ( 5 w/c's)	0	0	18	12	216	1.30	281

SS-1	Restroom-female ( 5 w/c's)	0	0	18	12	216	1.30	281
SS-2	Restroom-male ( 5 w/c's)	0	0	18	12	216	1.30	281
SS-3	Mechanical	0	0	10	15	150	1.30	195
SS-4	Electrical Room	0	0	8	8	64	1.30	83
SS-5	IT Room	0	0	6	8	48	1.30	62
SS-6	Telephone Room	0	0	6	8	48	1.30	62
SS-7	Maintenance - Janitor	0	0	4	6	24	1.30	31
	Subtotal Support Spaces - Shops	-				766		996
	Grand Total - Shop Component	204	486			19,180		25,930

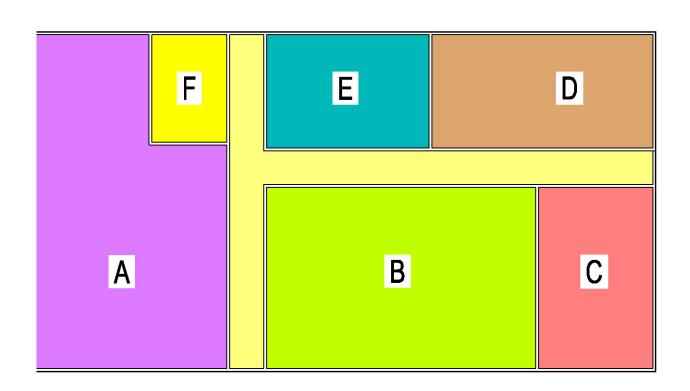


# INDIVIDUAL SPACE ANALYSIS

# Shop Component A. Heavy Equ

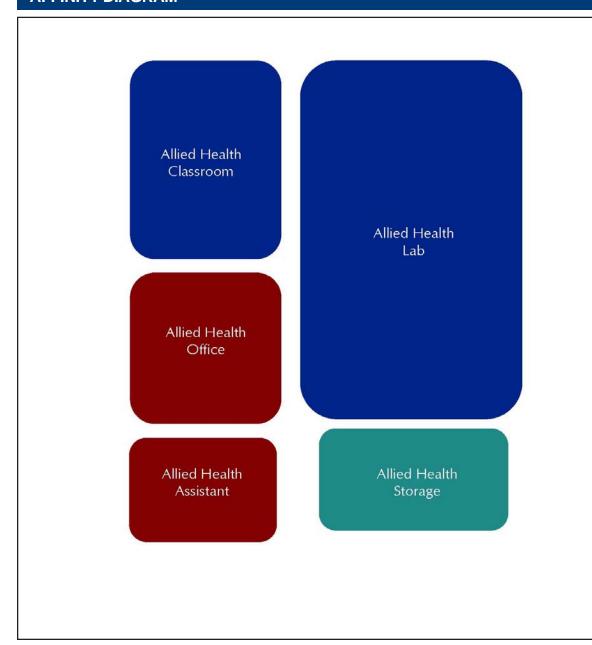
Heavy Equipment Shop
Welding Department
Building Trades
Petroleum Technology
Industrial Safety

Restrooms



# **4.1 ALLIED HEALTH DEPARTMENT**

# **AFFINITY DIAGRAM**



# Allied Health Department

 Health Lab
 : 2,232 nsf

 Classroom
 : 1,232 nsf

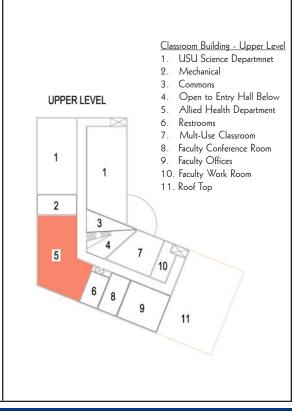
 Office
 : 120 nsf

 Assistant
 : 81 nsf

 Storage
 : 450 nsf

 Total
 4,115 nsf

# KEY PLAN



# **SPACE DESCRIPTION**

Function Lab and Mock Care Center

Adjacent or near Office w/direct window, Class
Same Floor as Storage, Business & Life Science

Occupants Staff: 1

Visitors: 30 Total: 31

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 20

 Data
 : 5

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : yes/60-65%

Work Surface (LF) : N/A

Tables : 3 (6 person)

Beds : 6 Additional Requirements :

Lockable, Windows, Dimmer lights for beds

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

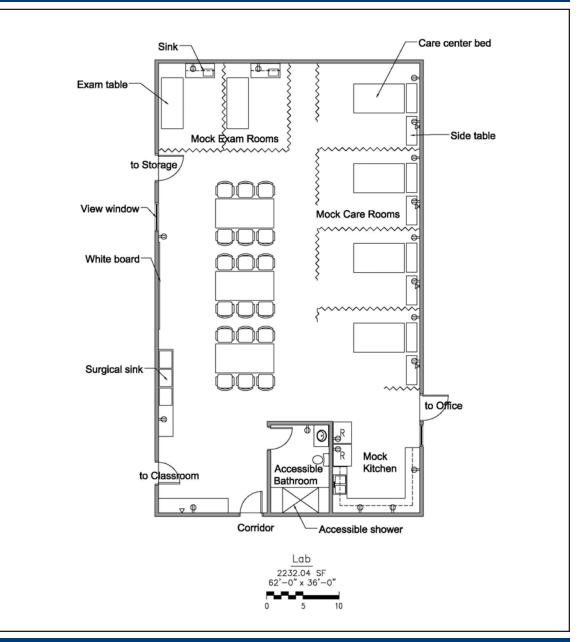
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Allied Health Teaching

Adjacent or near Allied Health Lab/Office/Storage

Same Floor as Business, Life Science

Occupants Staff: 1

Visitors: 30 Total: 31

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 17

 Data
 : 10

 Phone
 : 1

 Modem
 : 1

 Video
 : 10

Min. air change rate : 8

Min. Ventilation : 15 cfm/person
Air Recycle/Filtration : Yes/60-65%
Work Surface (LF) : 20' (countertop)

Tables : 15

Carrels : 10 (42"x24")

Lateral Files : N/AAdditional Requirements : Lockable

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber Walls : Painted

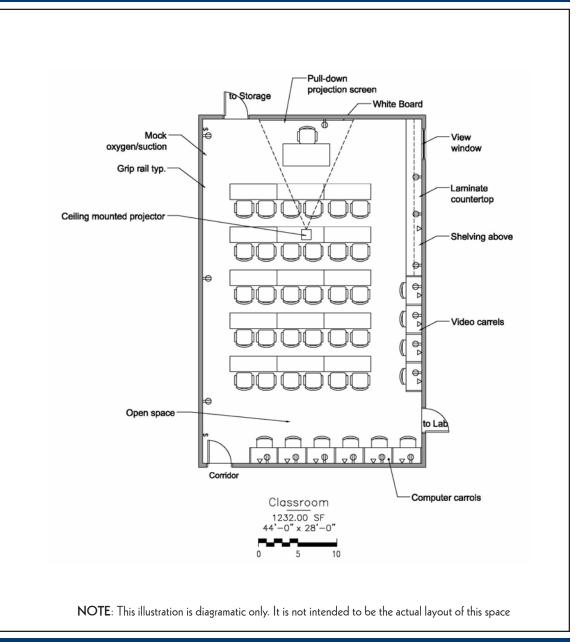
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc

Noise Control Level : NC35-40

Temperature : 72 deg F +/-



# **SPACE DESCRIPTION**

Function Allied Health Instructor

Adjacent or near Allied Classroom/Window to Lab

Same Floor as N/A

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

220V outlets : 1
Data : 1
Phone : 1
Modem : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Air Recycle/Filtration :  $y_{es}/60-65\%$ 

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 drawer/office

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

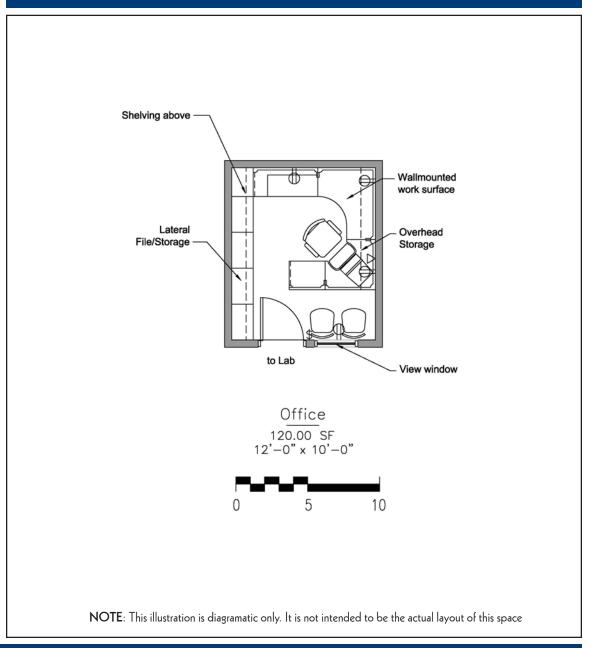
Finishes Floor : VCT

Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Allied Health Assistant Director

Adjacent or near Allied Health Lab

Same Floor as Allied Health Office/Classroom

Occupants Staff: 1

Visitors: 0 Total: 1

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 3

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 - 2 drawer

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

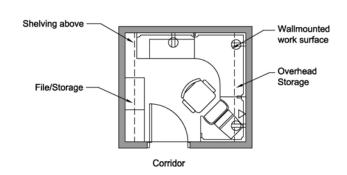
Finishes Floor : Carpet

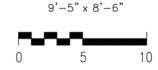
Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 9'

Lighting Level : 50 Fc
Noise Control Level : NC35
Temperature : 72 deg F +/-

# **ROOM DIAGRAM**





Assistant

80.00 SF

NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Allied Health Storage

Adjacent or near Allied Health Lab/Office/Stor.

Same Floor as Business, Life Science

Occupants Staff: 1

Visitors: 1
Total: 2

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 6

 Data
 : 1

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 - 2 drawer

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

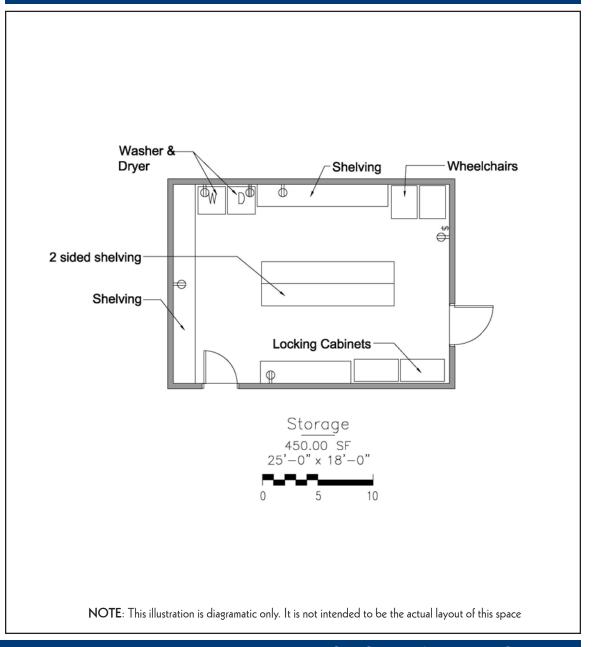
Finishes Floor : VCT

Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

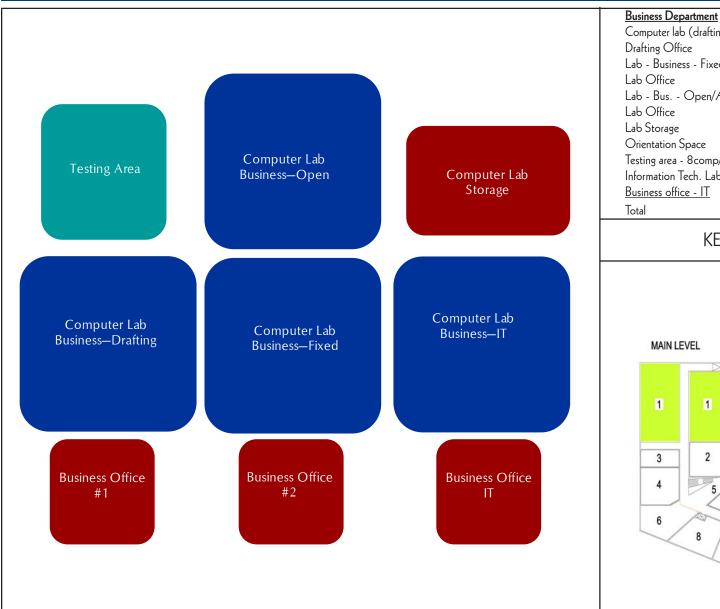
Ceiling height : 9'

Lighting Level : 50 Fc
Noise Control Level : NC35
Temperature : 72 deg F +/-



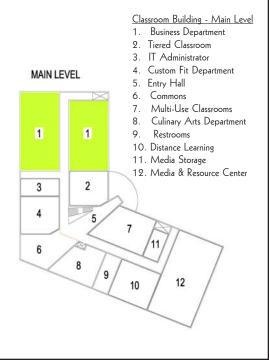
# **4.2 BUSINESS DEPARTMENT**

# **AFFINITY DIAGRAM**



Computer lab (drafting) : 1,280 nsf 144 nsf Lab - Business - Fixed : 1,155 nsf : 120 nsf Lab - Bus. - Open/Assit : 1,374 nsf 120 nsf 198 nsf Orientation Space 200 nsf Testing area - 8comp/8reg. 469 nsf Information Tech. Lab/Class : 2,100 nsf Business office - IT : 120 nsf 7,210 nsf

# KEY PLAN



# **SPACE DESCRIPTION**

Function Fixed Computer Lab instructor's office

Adjacent or near Other Comp. Labs/ IT Admin.

Same Floor as IT Administrator - Grade Level

Occupants Staff: 1 Visitors: 22

Total: 23

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 27

 Data
 : 25

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Additional Requirements: Lockable

Tables : 20(72``x36''Shelving : 136 lineal feet

# **ROOM FINISHES & ENVIRONMENT**

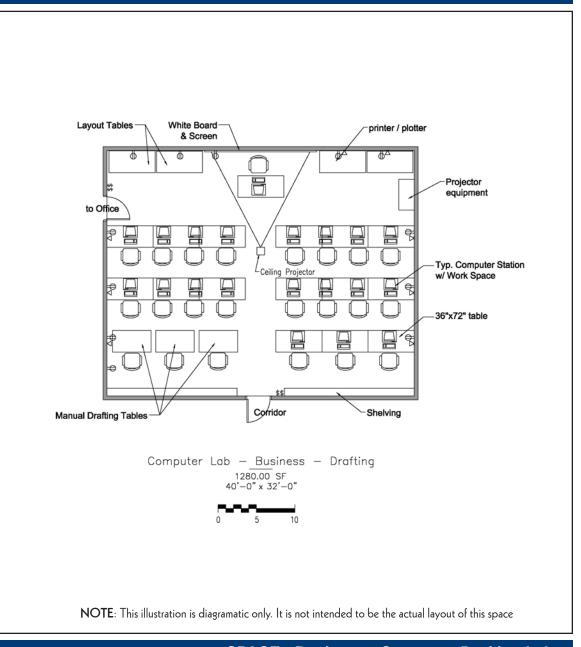
Finishes Floor : Anti-Static Carpet

Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function CADD Drafting instructor's office

Adjacent or near Comp. Lab - Drafting, Open Lab
Same Floor as IT Administrator - Grade Level

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 14 Shelving (LF) : 21

Lateral Files : 3 (2 drawers)

Additional Requirements: Lockable

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Anti-Static Carpet

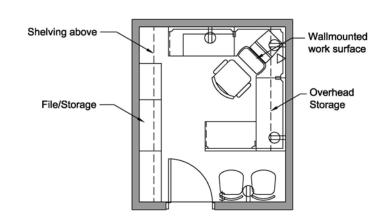
Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Drafting Office 120.00 SF 12'-0" x 10'-0"



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Fixed Lab for Student Use

Adjacent or near Computer Lab - Fixed, IT Office
Same Floor as Comp. Lab Storage - Grade Level

Occupants Staff: 1

Visitors: 30 Total: 31

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36

 Data
 : 32

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Tables : 17 (72"x36")
Privacy Carrels : 9 (48" wide)

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

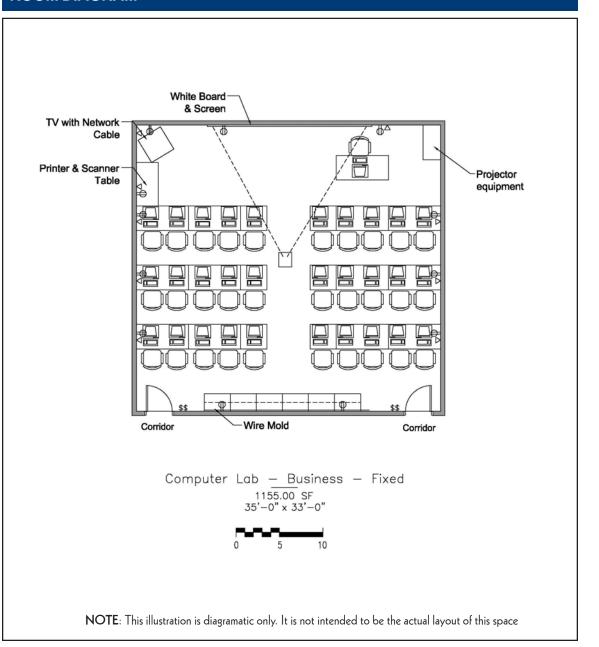
Finishes Floor : Anti-Static Carpet

Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Fixed Computer Lab instructor's office

Adjacent or near Comp. Lab - Drafting, Open Lab

Same Floor as IT Administrator - Grade Level

Occupants Staff: 1 Visitors: 2

Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 14 Shelving (LF) : 21

Lateral Files : 3 (2 drawers)

Additional Requirements: Lockable

# **ROOM FINISHES & ENVIRONMENT**

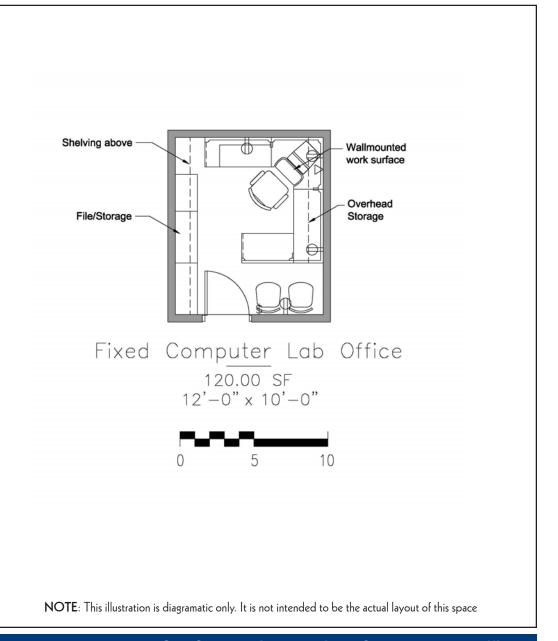
Finishes Floor : Anti-Static Carpet

Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Open Lab for Student Use

Adjacent or near Computer Lab - Fixed, IT Office
Same Floor as Comp-Lab Storage - Grade Level

Occupants Staff: 1

Visitors: 36 Total: 37

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 42

 Data
 : 37

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

**Tables** : 16 (72"x36") **Privacy Carrels** : 10 (48" wide)

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

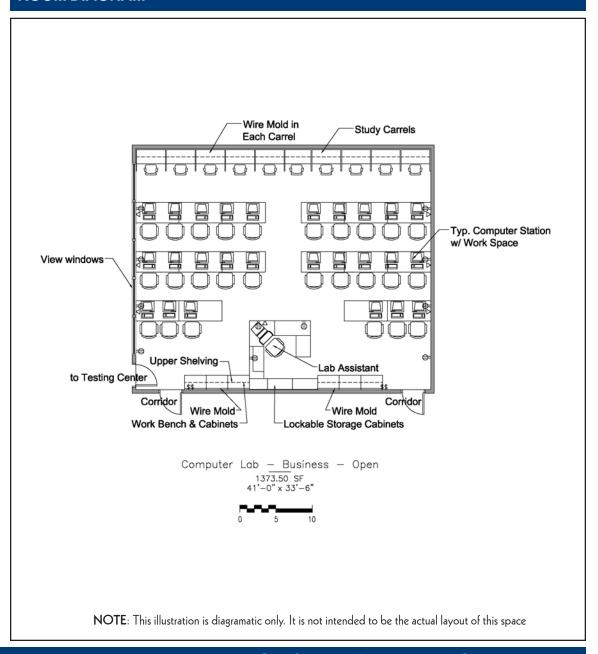
Finishes Floor : Anti-Static Carpet

Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'
Lighting Level : 50fc

Noise Control Level : NC35 Temperature : 72 deg F +/-



# **SPACE DESCRIPTION**

Function Storage for computer labs

Adjacent or near Computer Labs - Fixed, Open, IT Same Floor as Same as above - Grade Level

Occupants Staff: 1

Visitors: 0 Total: 1

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 2

Data Phone : 0 Modem : 0 Video : 0

Shelving (LF) : 128 If (18" deep)
Work Bench : 96" x 36"

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

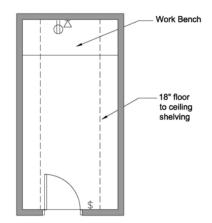
Base : Rubber Walls : Painted Ceiling : Acoustical Tile

Ceiling height : 8,

Lighting Level : 50fc Noise Control Level : NC35

: 72 deg F +/-Temperature

# **ROOM DIAGRAM**



Computer Lab Storage 1 127.97 SF 8'-0" x 16'-0"



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Testing - Computer Stations

Adjacent or near Open Lab - Grade Level
Same Floor as Fixed Lab, Business Office

Occupants Staff: 0

Visitors: 16 Total: 16

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 10

 Data
 : 8

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Privacy Carrels (48"w) : 8
Privacy Carrels (42"w) : 8
Additional Requirements:

Windows into Open Lab - View from

lab Assistant

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Anti-Static Carpet

Base : Rubber Walls : Painted

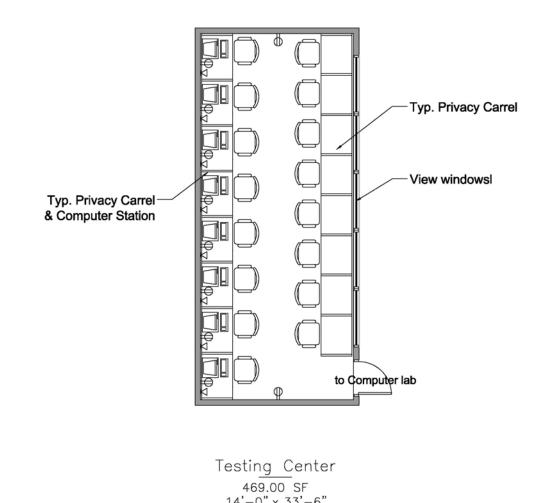
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



469.00 SF 14'-0" x 33'-6" 0 5 10

NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Open Lab for Student Use

Adjacent or near Computer Lab - Fixed, IT Office

Same Floor as Comp-Lab Storage - Grade Level

Occupants Staff: 1

Visitors: 24 Total: 25

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 50

 Data
 : 45

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Tables : 38 (72"x36")

Additional Requirements: Lockable

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

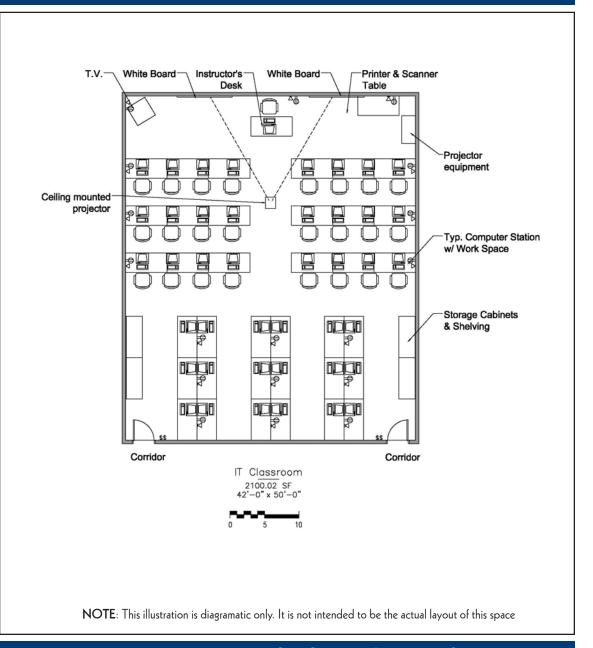
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Information Technology instructor's office Adjacent or near Comp. Lab - Drafting, Open Lab Same Floor as IT Administrator - Grade Level

Occupants Staff: 1 Visitors: 2

Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 14 Shelving (LF) : 21

Lateral Files : 3 (2 drawers)

Additional Requirements: Lockable

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Anti-Static Carpet

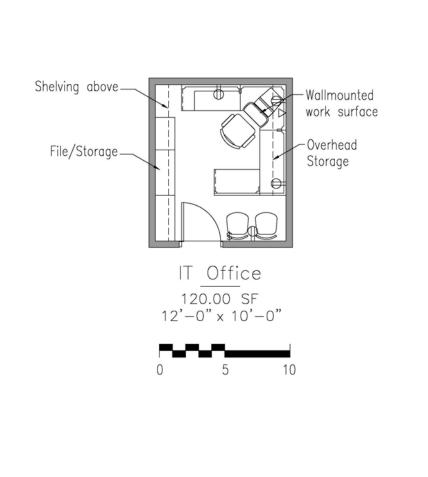
Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature : 72 deg F +/-

# **ROOM DIAGRAM**



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space



# **AFFINITY DIAGRAM**

Information Technology Department

# IT Administrator Admin., Server, Storage : 600 nsf Total 600 nsf KEY PLAN Classroom Building - Main Level 1. Business Department 2. Tiered Classroom 3. IT Administrator MAIN LEVEL 4. Custom Fit Department 5. Entry Hall 6. Commons 7. Multi-use Classrooms 8. Culinary Arts Department 9. Restrooms 10. Distance Learning 11. Media Storage 12. Media & Resource Center 2 3

# **SPACE DESCRIPTION**

Function IT Administrator office, Storage & Server Adjacent or near Computer Labs, Distance Learning

Same Floor as Grade Level

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : TBD

 Phone
 : 2

 Modem
 : TBD

 Video
 : O

Pressure Differential : Positive

Air Recycle/Filtration :  $\frac{96}{60-65}$ Work Space (LF) : 42 (24"deep) Work Table : 2 (36"x 96")

Additional Requirements:

Server Room will have Specific HVAC/

Electrical / Data Requirements

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

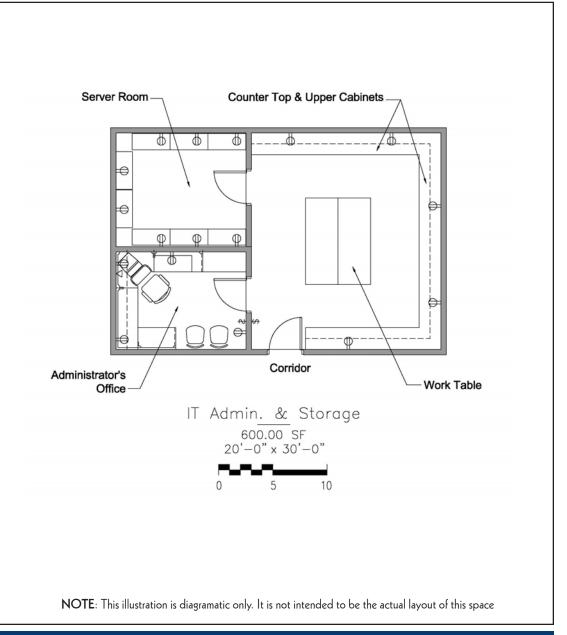
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 9'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# 4.4 CUSTOM FIT DEPARTMENT

# **AFFINITY DIAGRAM**

Custom Fit Office #1 Custom Fit Classroom #1 Custom Fit Office #2 Custom Fit Storage/ **Energy Services** Custom Fit Office #3

Custom Fit Department Classroom : 1,040 nsf Storage : 180 nsf Office 120 nsf Office : 120 nsf Office : 120 nsf Total 1,580 nsf KEY PLAN Classroom Building - Main Level 1. Business Department 2. Tiered Classroom 3. IT Administrator 4. Custom Fit Department MAIN LEVEL 5. Entry Hall 6. Commons 7. Mult-use Classrooms 8. Culinary Arts Department 9. Restrooms 10. Distance Learning 11. Media Storage 12. Media & Resource Center

3

4

12

# **SPACE DESCRIPTION**

Function Custom Fit, Private & Quick Start Training
Adjacent or near CF Office & Classroms

Same Floor as Energy Services, LCV, Petro. Tech

Occupants Staff: 1

Visitors: 30 Total: 31

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36

 Data
 : 31

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Tables (72" x 18") : 15
Tables (72" x 36") : 1
Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

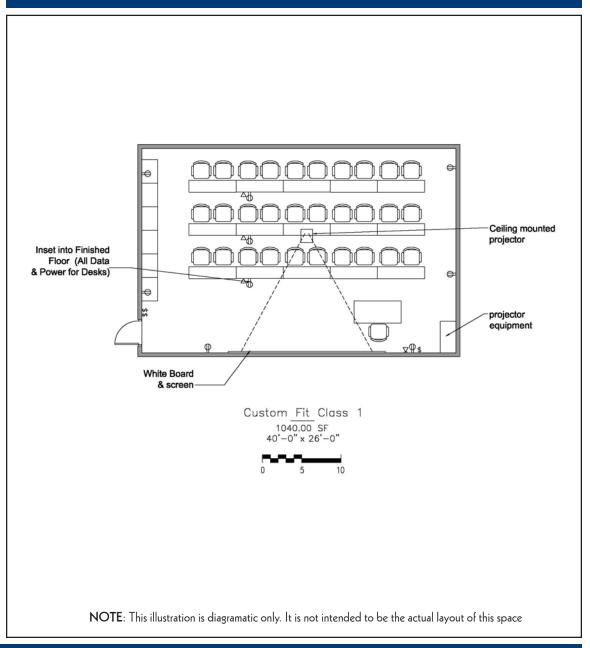
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Storage for CF/Private & Quick Start

Training supplies + 7yrs doc. file storage

Adjacent or near CF Office & Classroms

Same Floor as Front Office and Waiting Area

Occupants

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

**Shelving (LF)** : 144 (15"deep)

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

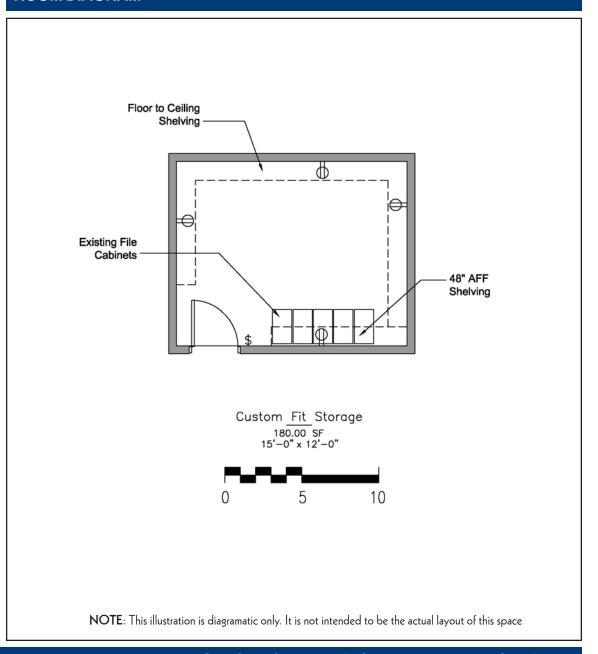
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Custom Fit Director

Adjacent or near CF Office & Classroms

Same Floor as Front Office/Waiting area

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 20 Shelving (LF) : 20

Additional Requirements: Exterior Windows

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

Base : Rubber Walls : Painted

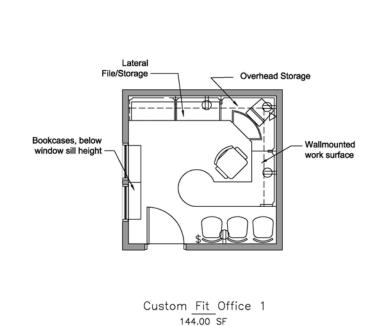
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



12'-0" x 12'-0"

10

NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Custom Fit Office

Adjacent or near CF Office & Classroms

Same Floor as Front Office & Waiting Area

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 15 Shelving (LF) : 20 Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

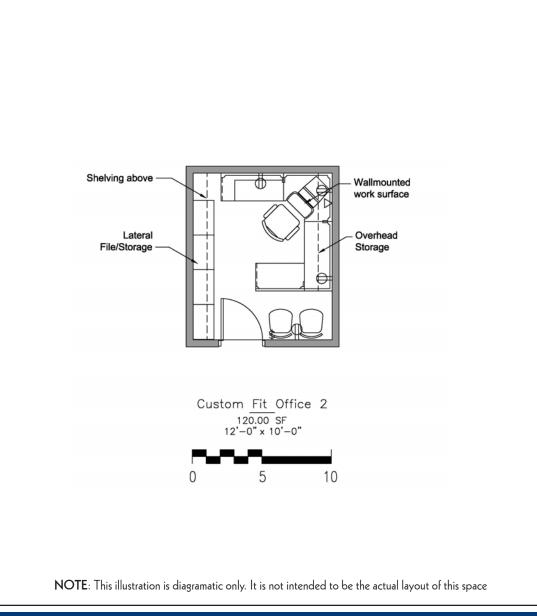
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Custom Fit Office

Adjacent or near CF Office & Classroms

Same Floor as Front Office & Waiting Area

Occupants Staff: 1

Visitors: 2 Total: 3

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Work Surface (LF) : 15 Shelving (LF) : 20 Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

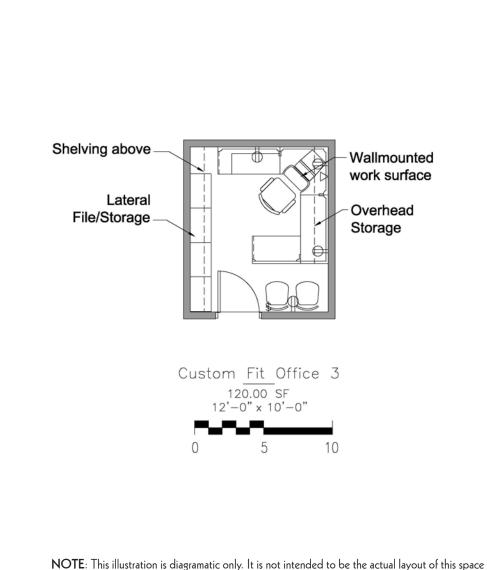
Base : Rubber
Walls : Painted
Ceiling : Acousti

Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



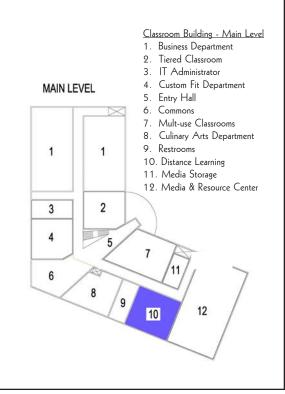
# 4.5 DISTANCE LEARNING STUDIO

# **AFFINITY DIAGRAM**

Distance Learning Classroom

# <u>Distance Learning Studio</u> <u>Studio</u> Total 1,296 nsf 1,296 nsf

# KEY PLAN



# SPACE DESCRIPTION

Function Structured Classes / Meetings
Adjacent or near Equip. & Satellite Rooms
Same Floor as USU Offices, Main entry

Occupants Staff: 2

Visitors: 50 Total: 52

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 66 (plug mold)

Data : 54 Phone : 2 Video : 4

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Tables (72"x18") : 25
Tables (72" x 36") : 2

Additional Requirements:

Recessed spot lights at front of room, High load for cooling/heating, fire suppression system.

Dimming in front of room - Typical

# **ROOM FINISHES & ENVIRONMENT**

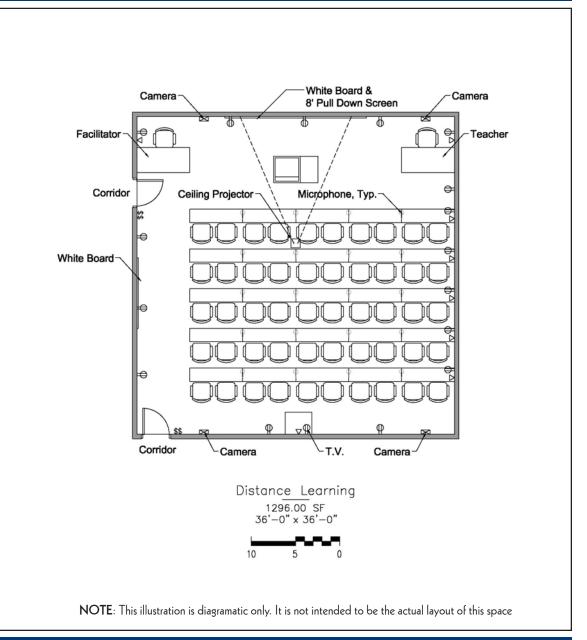
Finishes Floor : Carpet

Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35-40
Temperature : 72 deg F +/-



# 4.6 SCIENCE DEPARTMENT

# **AFFINITY DIAGRAM**

Life Sciences Lab

Storage

Biology

General Sciences Lab

Chemistry Lab

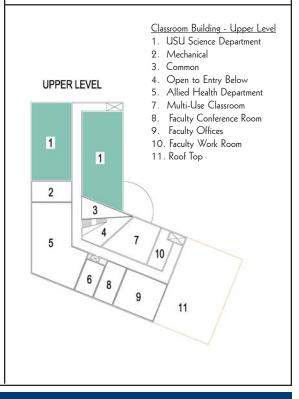
Lab Prep & Chemical Storage Science & Equipment Storage

Herbarium

Science Department

Life Science Lab : 1,280 nsf General Science Lab : 1,296 nsf Chemistry Lab : 1,360 nsf Lab Prep & Chem Storage : 720 nsf Herbarium 300 nsf Science & Equip Storage : 300 nsf Biology Storage : 750 nsf Total 6,006 nsf

# KEY PLAN



# **SPACE DESCRIPTION**

Function Teach biology and other science labs

Adjacent or near Chem/prep& equip storage

Same Floor as

Occupants Staff: 1

Students: 24 Total: 25

# **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: 15

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15cfm/person Work Surface (LF) : 50 (24"w)

Tables : 13 Shelving (LF) :

Additional Requirements:

Gas, vacuum, hot & cold water, exhaust

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

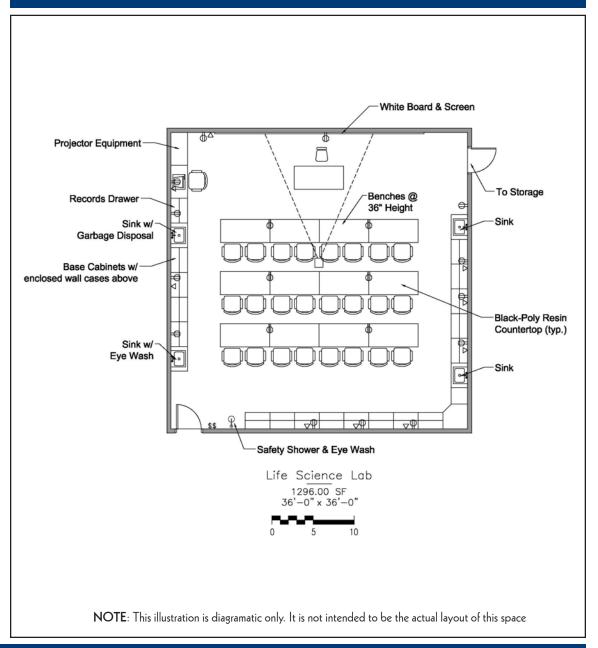
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Classroom/Laboratory Teaching Lab Adjacent or near Physical Science lab storage

Same Floor as Faculty Offices

Occupants Staff: 1

Students: 24 Total: 25

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 12

220V outlets : 2
Data : 10
Phone : 1
Modem : 1
Video : 1

Min. air change rate : 8

Min. Ventilation : 15cfm/person Air Recycle/Filtration : Yes/60-65% Work Surface (LF) : 33 (24"w)

 Tables
 : 12

 Shelving (LF)
 : 13

Additional Requirements:

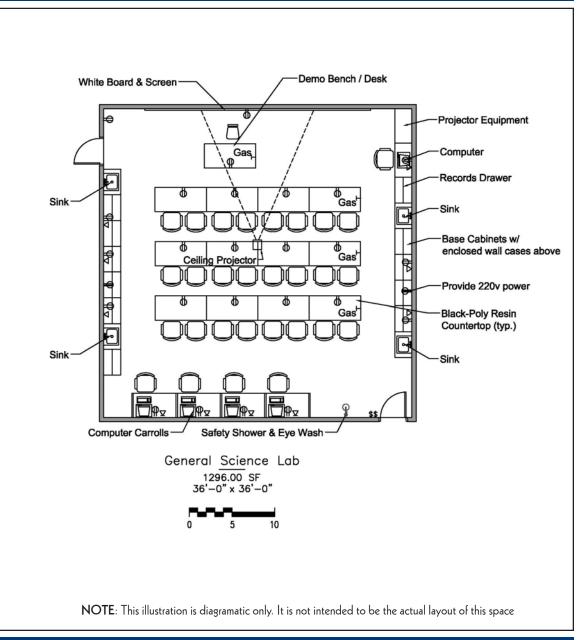
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber
Walls : Painted
Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



#### **SPACE DESCRIPTION**

Function General teaching & organic chemistry lab Adjacent or near Chemistry storage & other labs

Same Floor as All science labs Occupants Staff:

> Students: 24 Total: 26

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 24

220V outlets: 0 Data Phone Modem: 1 Video . 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/ 60-65% Tables : 26 (42"x30") Exhaust Hoods : 12 (dbl occupant)

Additional Requirements: Lockable, air gas, DI water, hot & cold water,

Vacuum

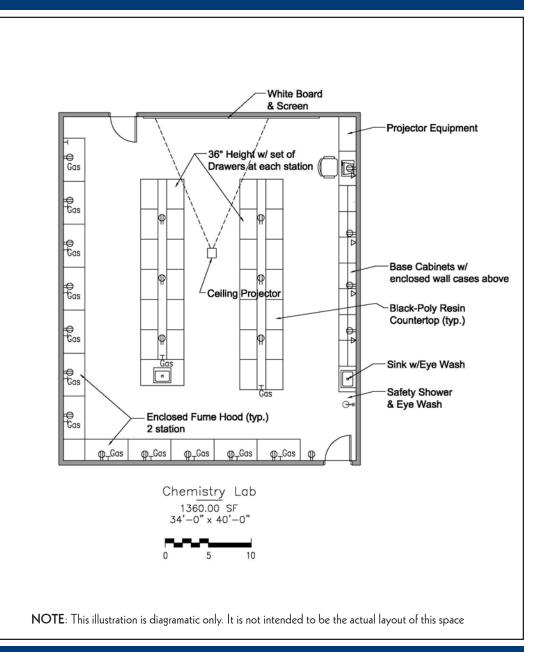
#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber Walls : Painted Ceiling : Painted Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

: 72 deg F +/-Temperature



#### **SPACE DESCRIPTION**

Function Storage of physical science items

Adjacent or near Chemistry, Life & Gen Science

Same Floor as All science labs

Occupants Staff: 1

Students: 3
Total: 4

# **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: 5

 220V outlets : 0

 Data : 1

 Phone : 1

 Modem : 1

 Video : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/ 60-65%

Work Surface (LF) : N/A

Tables : Work bench Shelving (LF) : 80 lineal feet

Additional Requirements:

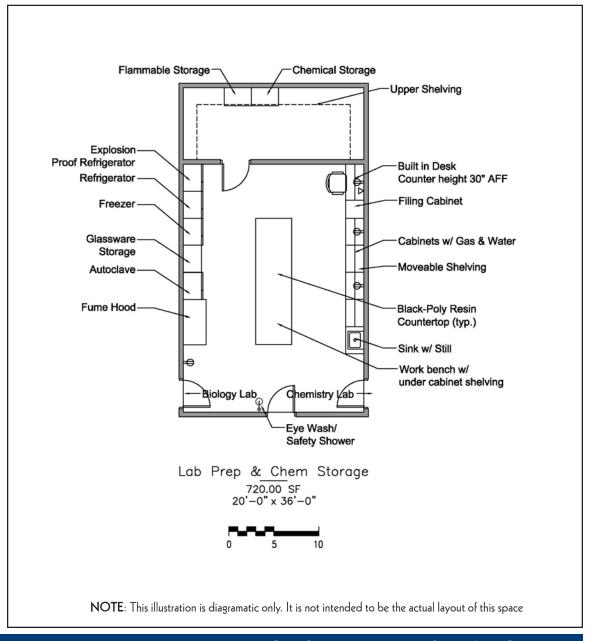
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber
Walls : Painted
Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Storage & Prep of botanical specimens

Adjacent or near All science labs Same Floor as All science labs Occupants Staff:

Students: 3 Total:

# **SPECIAL REQUIREMENTS**

120V outlets: 4 Electrical

> Data Phone : 0 Modem : 0 Video : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) : N/A

Tables : 2 (22" x 36")

Shelving (LF) : N/A

Additional Requirements:
Use existing cabinets approx 10 (84" x 26" x

19")

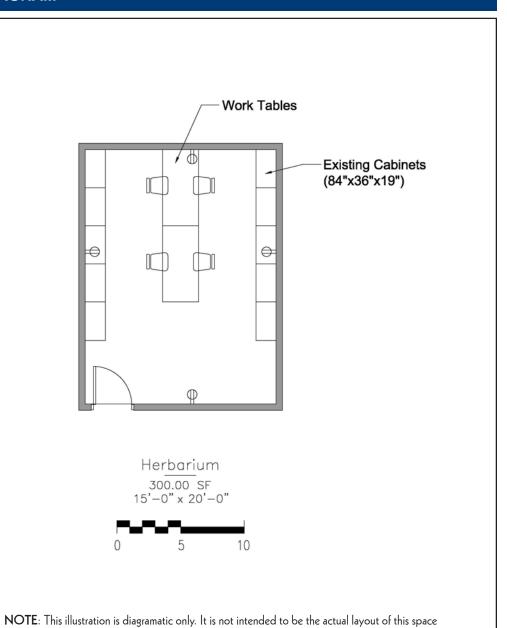
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber Walls : Painted Ceiling : Painted Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

: 72 deg F +/-Temperature



# **SPACE DESCRIPTION**

Function Storage of physical science items

Adjacent or near General Science & Biology

Same Floor as Exterior Exit

Occupants Staff: N/A

Students: N/A
Total: N/A

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 0

 220V outlets : 0

 Data : 0

 Phone : 0

 Modem : 0

 Video : 0

 Min. air change rate
 : N/A

 Min. Ventilation
 : N/A

 Air Recycle/Filtration
 : N/A

 Work Surface (LF)
 : N/A

 Tables
 : 0

 Shelving (LF)
 : 126

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber Walls : Painted

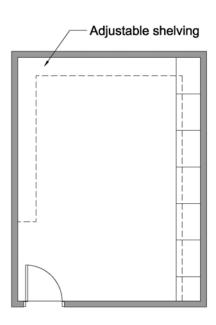
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Science & <u>Equ</u>ip. Storage 300.00 SF 15'-0" x 20'-0"



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Storage for Biology Lab

Adjacent or near Bio prep/equip. storage

Same Floor as All science labs

Occupants Staff: 1

Students: 1 Total: 2

# **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: 4

 220V outlets : 2

 Data : 2

 Phone : 0

 Modem : 0

 Video : 0

Min. air change rate : 8

Min. Ventilation : 15cfm/person Air Recycle/Filtration : Yes / 60-65%

Lockable Cabinets : 2 Shelving (LF) : 940

Additional Requirements: Gas, vacuum, hot & cold water

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

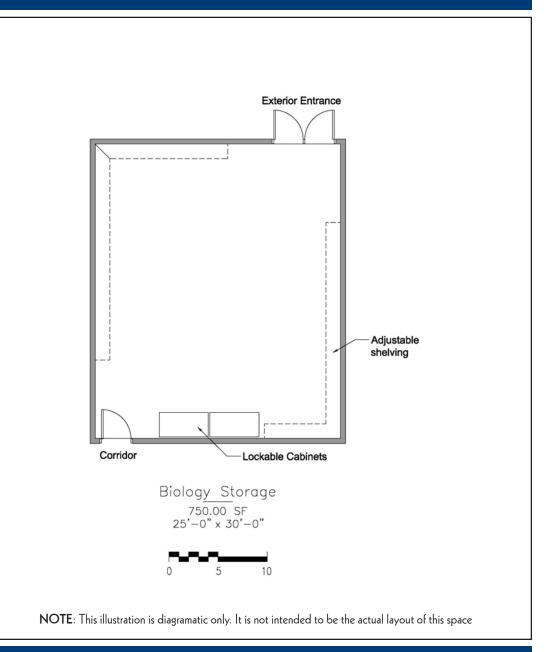
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

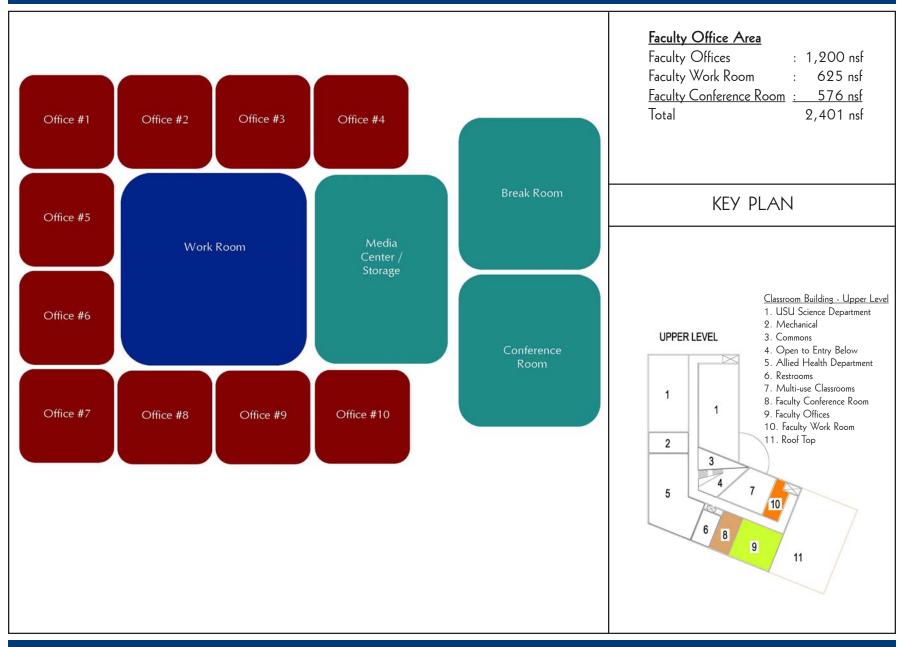
Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# 4.7 FACULTY OFFICE AREA

# **AFFINITY DIAGRAM**



# **SPACE DESCRIPTION**

Function Faculty office suite

Adjacent or near Break room / Media Center

Same Floor as Exterior Exit

Occupants Staff: 1/ office

Visitors: 2/ office Total: 3/ office

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 8

 Data
 : 4

 Phone
 : 2

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : yes/60-65%

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 drawer/office

Additional Requirements: Windows

# ROOM FINISHES & ENVIRONMENT

Finishes Floor : Carpet

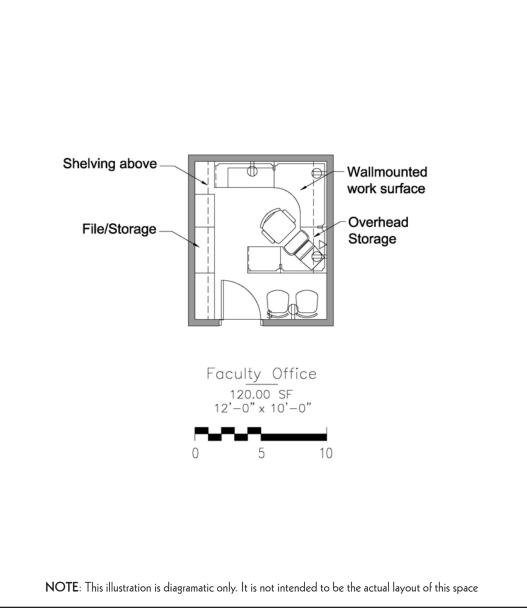
Base : Rubber
Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Faculty lounge and collaboration space

Adjacent or near Office Area

Same Floor as Media Center

Occupants Staff: 24

Visitors: 0 Total: 24

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 8

 Data
 : 1

 Phone
 : 2

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : yes/60-65%

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 - 2 drawer
Additional Requirements: Windows

# **ROOM FINISHES & ENVIRONMENT**

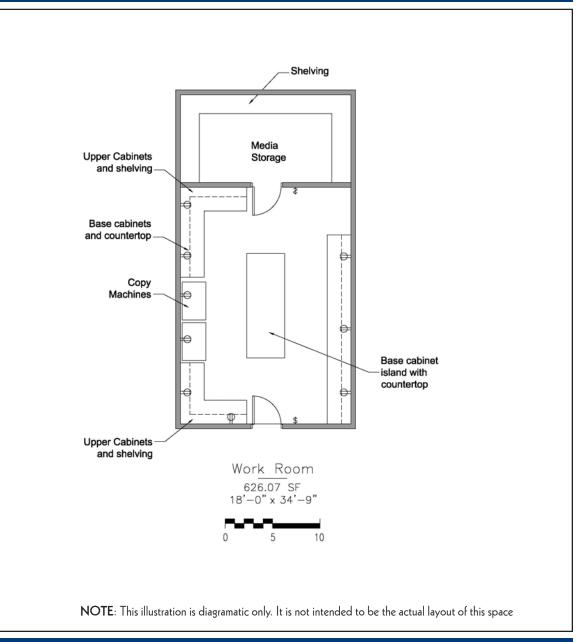
Finishes Floor : Carpet

Base : Rubber Walls : Painted

Ceiling : Acoustical Tile
Ceiling height : 10'

Lighting Level : 50 Fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Faculty work room

Adjacent or near USU faculty office suite

Same Floor as Exterior exit

Occupants Staff: 24

Visitors: 0 Total: 24

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 9

 Data
 : 4

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) : 12 Shelving (LF) : 17

Lateral Files : 2 - 2 drawer

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

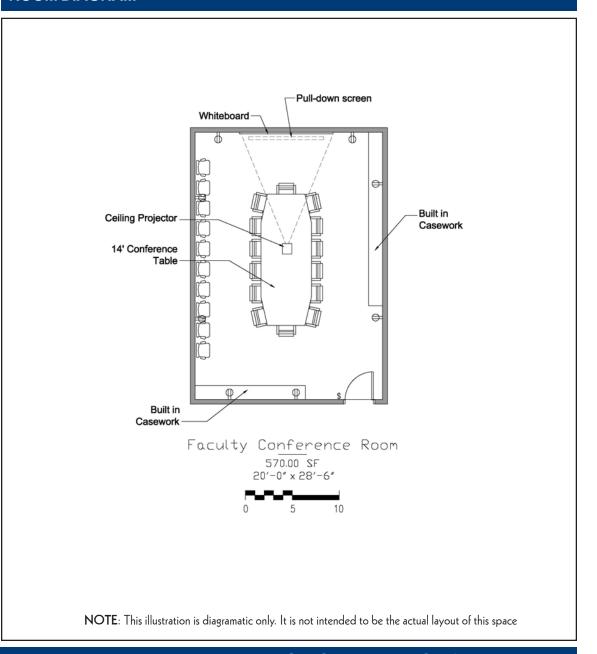
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

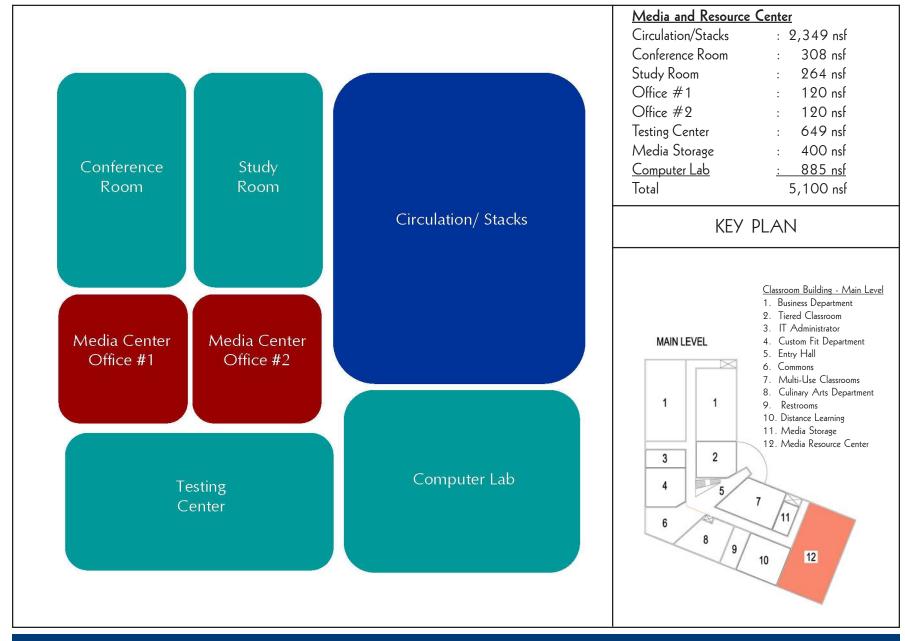
Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# 4.8 MEDIA AND RESOURCE CENTER

# **AFFINITY DIAGRAM**



# **SPACE DESCRIPTION**

Function Student media and study center

Adjacent or near Media Center Offices

Same Floor as Work Room / Faculty Offices

Occupants Staff: 2

Visitors: 30 Total: 32

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 34

Data : 30 Phone : 2 Modem : 0

Video : 0

Tables (72"x36") : 12 Stacks (72"x18") : 36 Stacks (72"x9") : 8

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

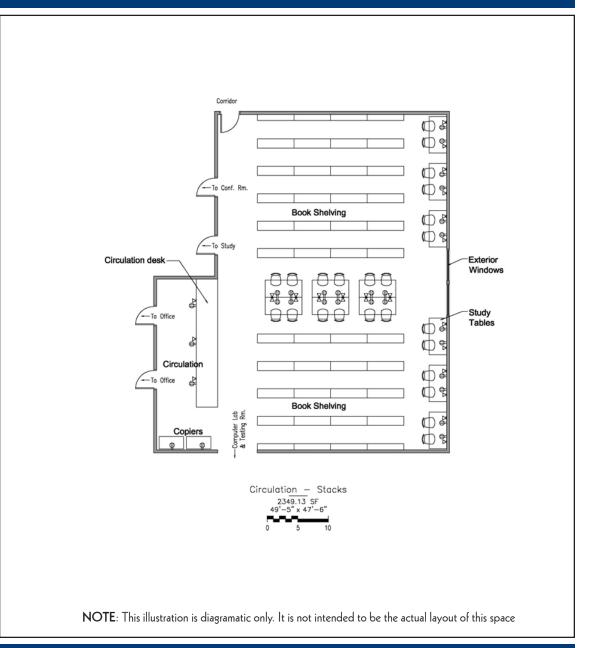
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Conferene Room for the media center

Adjacent or near Circulation/Stacks

Same Floor as Work Room / Faculty Offices

Occupants Staff: 0

Visitors: 12 Total: 12

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

**Tables** : 1(12' long)

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

Base : Rubber Walls : Painted

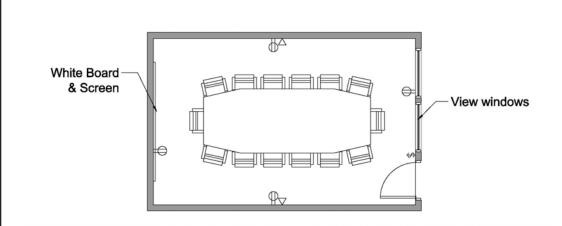
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Conf. Rm 308.00 SF 14'-0" x 22'-0"



# **SPACE DESCRIPTION**

Function Study Room for Student Collaboration

Adjacent or near Circulation/Stacks

Same Floor as Work Room / Faculty Offices

Occupants Staff: 0

Visitors: 8 Total: 8

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Tables : 2(72"x36")

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

Base : Rubber Walls : Painted

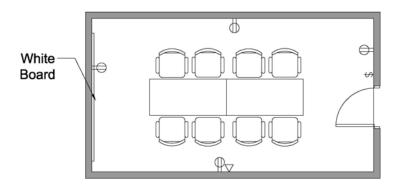
Ceiling : Acoustical Tile

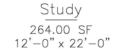
Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**







# **SPACE DESCRIPTION**

Function Office for Media Center Staff Adjacent or near Circulation/Stacks

Same Floor as Work Room / Faculty Offices

Occupants Staff: 1

Visitors: 2 Total: 3

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

220V outlets : 1
Data : 1
Phone : 1
Modem : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : yes/60-65%

Work Surface (LF) : N/AShelving (LF) : N/ALateral Files : N/A

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

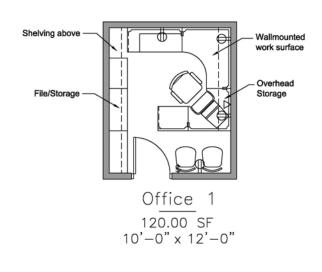
Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



# **SPACE DESCRIPTION**

Function Office for Media Center Staff Adjacent or near Circulation/Stacks

Same Floor as Work Room / Faculty Offices

Occupants Staff: 1

Visitors: 2 Total: 3

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

220V outlets : 1
Data : 1
Phone : 1
Modem : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : yes/60-65%

Work Surface (LF) : N/AShelving (LF) : N/ALateral Files : N/A

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

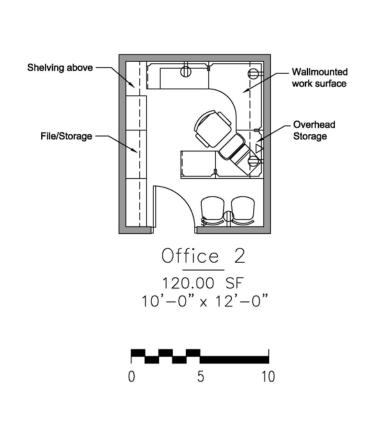
Base : Rubber
Walls : Painted
Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



# **SPACE DESCRIPTION**

Function Storage for Media Center
Adjacent or near Circulation/Stacks
Same Floor as Grade Level

Occupants Staff: 0

Visitors: 0 Total: 0

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 2

 Data
 : 2

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Shelving (LF) : 360 Lineal Feet

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

Base : Rubber
Walls : Painted
Ceiling : Acoustic

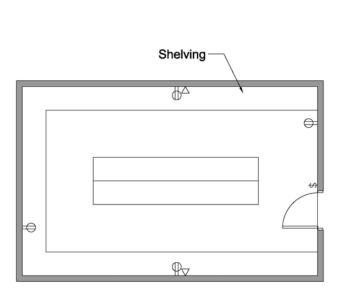
Ceiling : Acoustical Tile

Ceiling height : 9'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Media<u>St</u>orage 400.00 SF 16'-0" x 25'-0"



# **SPACE DESCRIPTION**

Function Testing Center for the Media Center

Adjacent or near Circulation/Stacks

Same Floor as Work Room / Faculty Offices

Occupants Staff: 1

Visitors: 24 Total: 25

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 6

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Tables : 12(72"x36")

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

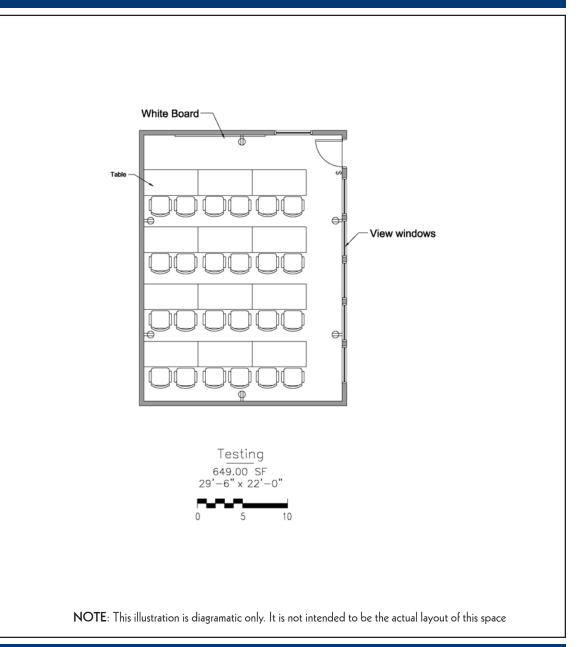
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Computer lab for student use

Adjacent or near Circulation/Stacks
Same Floor as Work Room / Faculty Offices

Occupants Staff: 0

Visitors: 32 Total: 32

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36

 Data
 : 36

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Tables : 18(72"x36")

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Anti - Static Carpet

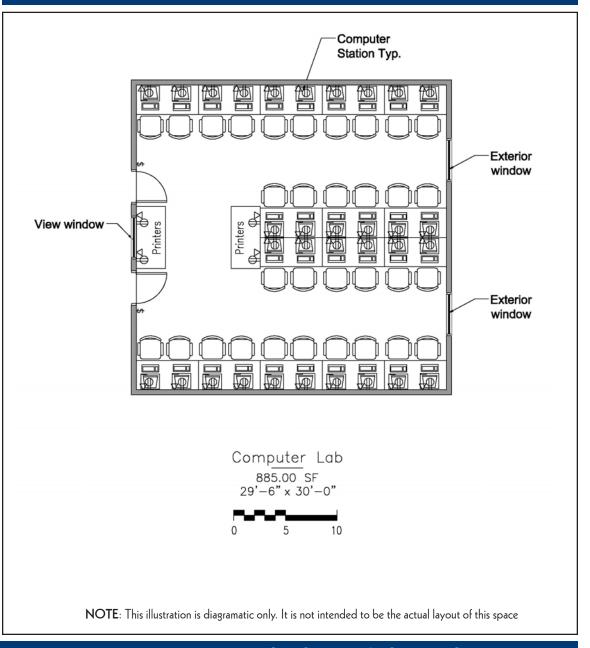
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# 4.9 CLASSROOMS AND GENERAL SPACES

# **AFFINITY DIAGRAM**

Multi–Use Classroom #1

Multi–Use Classroom # 3

Multi–Use Classroom #2 Tiered Classroom

# Classrooms and General Spaces

# KEY PLAN



# **SPACE DESCRIPTION**

Function USU Science Lectures/Seminars & Present.

Adjacent or near Main Entrance/Lobby

Same Floor as Exterior Exit

Occupants Staff: 2

Visitors: 88 Total: 90

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 100 (plug mold)

 Data
 : 10

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person
Air Recycle/Filtration : Yes/60-65%

18" curved table : 180 (LF)

Additional Requirements:

Microhone at front of Room. Wireless internet w/

power to the desks. Now window

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

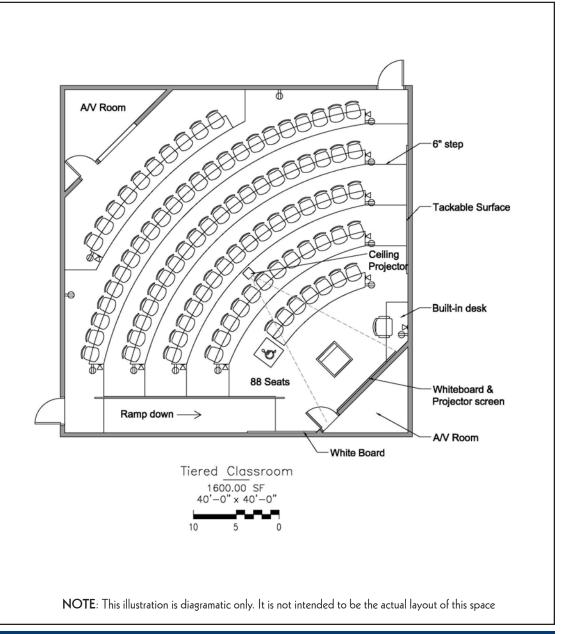
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 12'

Lighting Level : 50fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Structured Classes / Meetings
Adjacent or near Equip. & Satellite Rooms
Same Floor as USU Offices, Main entry

Occupants Staff: 1

Visitors: 30 Total: 31

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36 (plug mold)

 Data
 : 31

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/personAir Recycle/Filtration :  $\frac{\text{Yes}}{60-65\%}$ Tables :  $15 (72 \times 18)$ 

Additional Requirements: Lockable

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

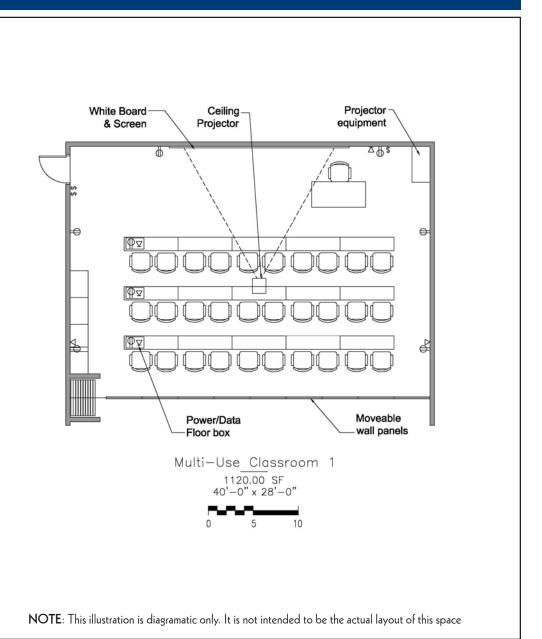
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Structured Classes / Meetings
Adjacent or near Equip. & Satellite Rooms
Same Floor as USU Offices, Main entry

Occupants Staff: 1

Visitors: 30 Total: 31

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36 (plug mold)

 Data
 : 31

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person
Air Recycle/Filtration : Yes/60-65%

Tables : 15 (72" x 18")

Additional Requirements: Lockable

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

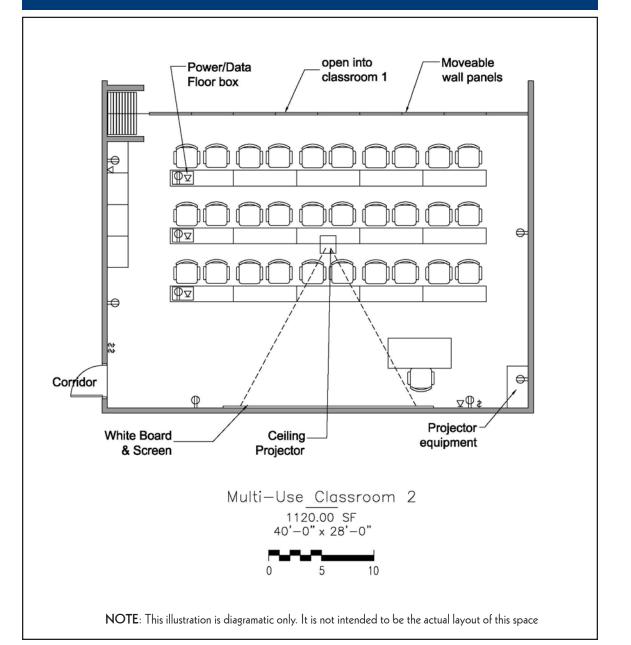
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Structured Classes / Meetings
Adjacent or near Equip. & Satellite Rooms
Same Floor as USU Offices, Main entry

Occupants Staff: 1

Visitors: 30 Total: 31

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 36 (plug mold)

 Data
 : 31

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person
Air Recycle/Filtration : Yes/60-65%

Tables : 15 (72" x 18")

Additional Requirements: Lockable

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

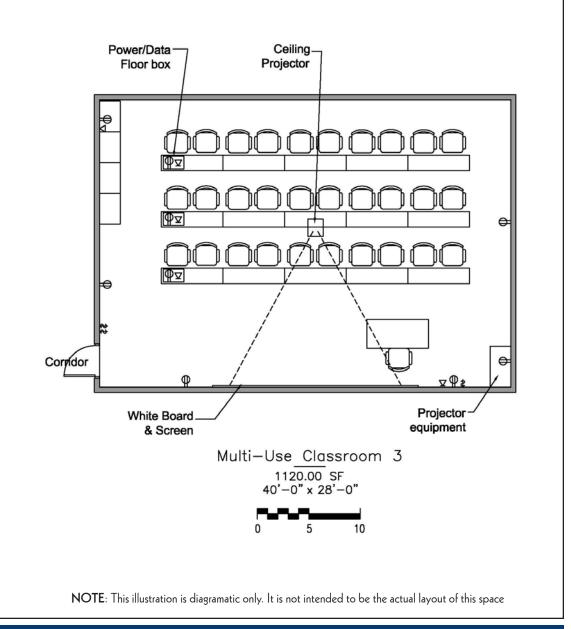
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

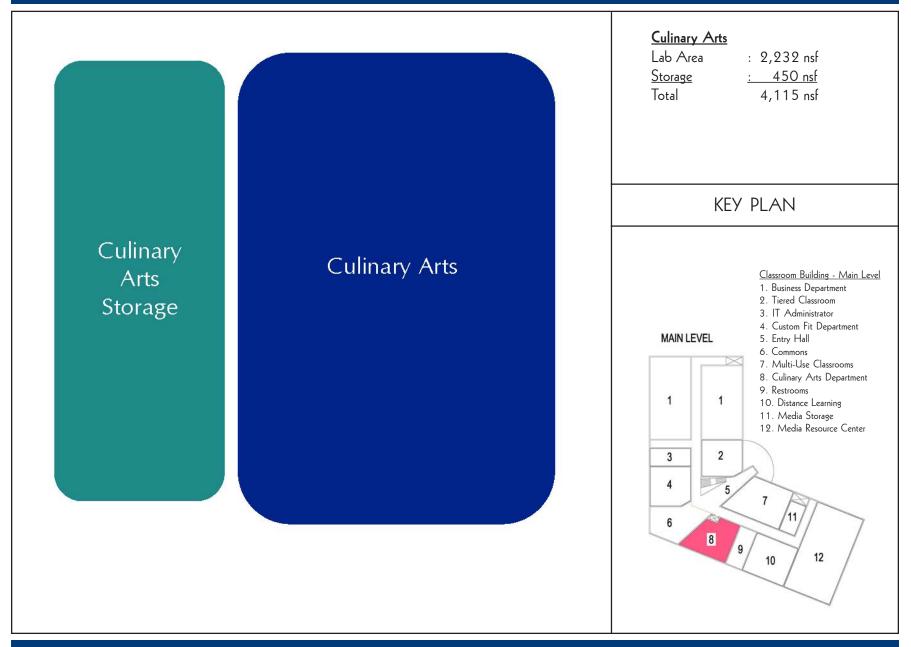
Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# 4.10 CULINARY ARTS DEPARTMENT

# **AFFINITY DIAGRAM**



# **SPACE DESCRIPTION**

Function Classroom/Lab for Culinary Arts Program
Adjacent or near Commons Area/Multi-Use Class
Same Floor as Exterior Exit/Restrooms

Same Floor as Exterior Exit/Restroo

 Occupants
 Staff:
 2

 Students:
 16

 Total:
 18

#### **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: TBD

220V outlets: TBD

Data : 1 (office)

Phone : 2 Modem : 1

Air Recycle/Filtration : Yes/60-65%

 Work Surface (LF)
 : TBD

 Tables
 : TBD

 Shelving (LF)
 : TBD

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

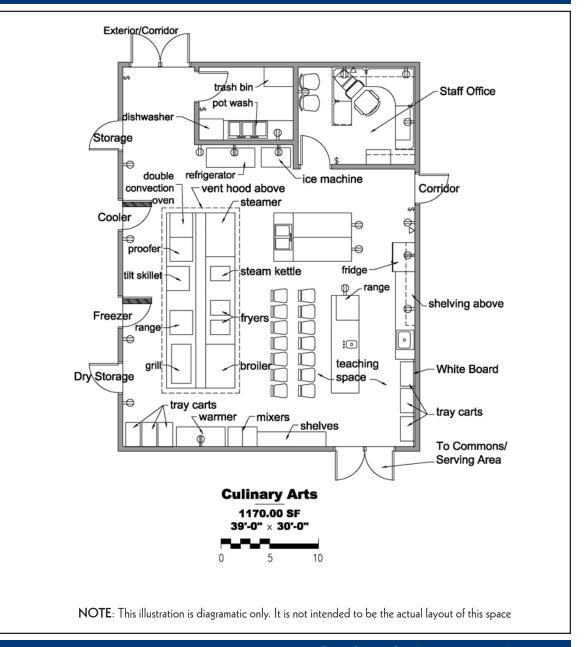
Base : Rubber Walls : Painted

Ceiling : Washable Acous. Tile

Ceiling height : 10'

Lighting Level : 75 Fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



#### **SPACE DESCRIPTION**

Function Storage rooms and refrigerators for CA

Adjacent or near Culinary Arts
Same Floor as Exterior Exit
Occupants Staff: 0

Students: 0
Total: 0

#### **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: TBD

220V outlets: TBD

Data : 1 (office)

Phone : 2 Modem : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) :  $\bigcirc$  Tables :  $\bigcirc$ 

Shelving (LF) : 350 lineal feet

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

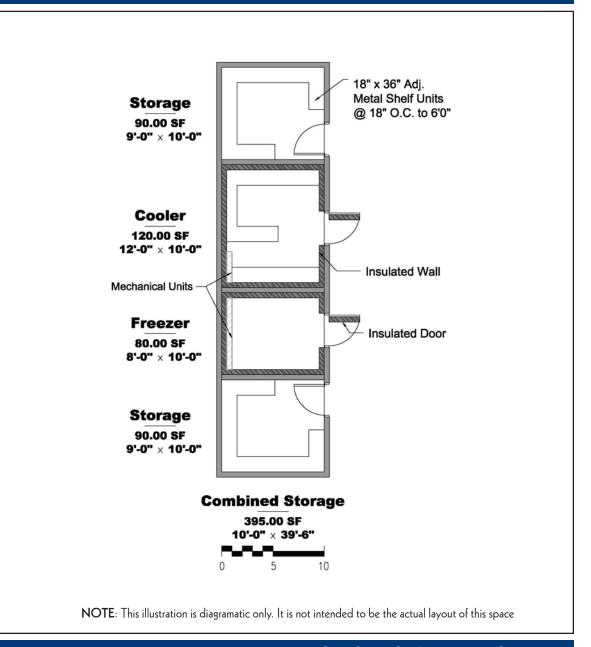
Base : Rubber Walls : Painted

Ceiling : Washable Acous. Tile

Ceiling height : 10'

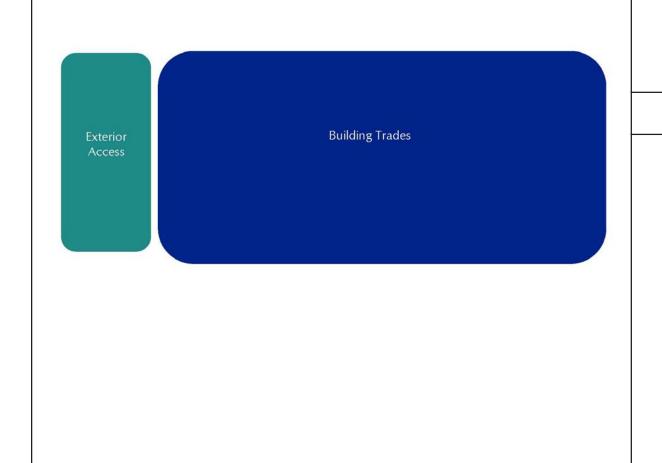
Lighting Level : 75 Fc Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **4.11 BUILDING TRADES DEPARTMENT**

# **AFFINITY DIAGRAM**



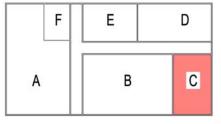
# **Building Trades**

Building Trades : 1,800 nsf Total : 1,800 nsf

# KEY PLAN

#### Shop Building

- A. Heavy Equipment Shop
- B. Welding Department
- C. Building Trades
- D. Petroleum Technology
- E. Industrial Safety
- F. Restrooms



#### **SPACE DESCRIPTION**

 $\textbf{Function} \ \ \text{To} \ \ \text{Facilitate the production of Cabinetry}$ 

Adjacent or near Exterior Access/Welding

Same Floor as Restrooms

Occupants Staff:

Visitors: 20 Total: 21

#### **SPECIAL REQUIREMENTS**

**Electrical** 120V outlets: TBD

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65%

Tables : 15 (72" x 18")

Additional Requirements:

Compressed air, 240 V, Power Drops in

Center, Exhauset System

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

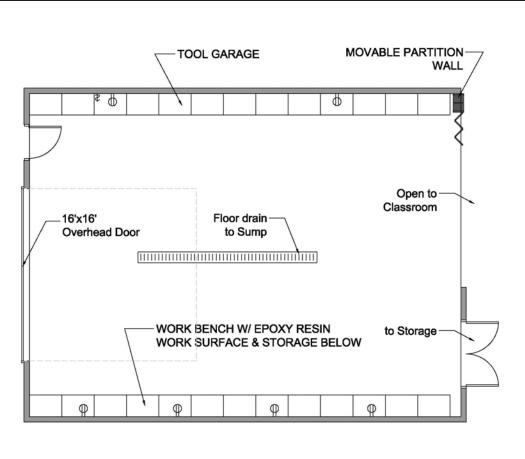
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 16'

Lighting Level: 75fc white lightNoise Control Level: NC35-40Temperature: 72 deg F +/-

# **ROOM DIAGRAM**



Building Trades
1200.00 SF
30'-0" x 40'-0"
0 5 10

# **SPACE DESCRIPTION**

Function To Facilitate the production of Cabinetry

Adjacent or near Exterior Access/Welding

Same Floor as Restrooms

Occupants Staff:

Visitors: 20 Total: 21

#### **SPECIAL REQUIREMENTS**

120V outlets: TBD Electrical

> Data Phone Modem Video : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person Air Recycle/Filtration : Yes/60-65% Tables

: 15 (72" x 18")

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

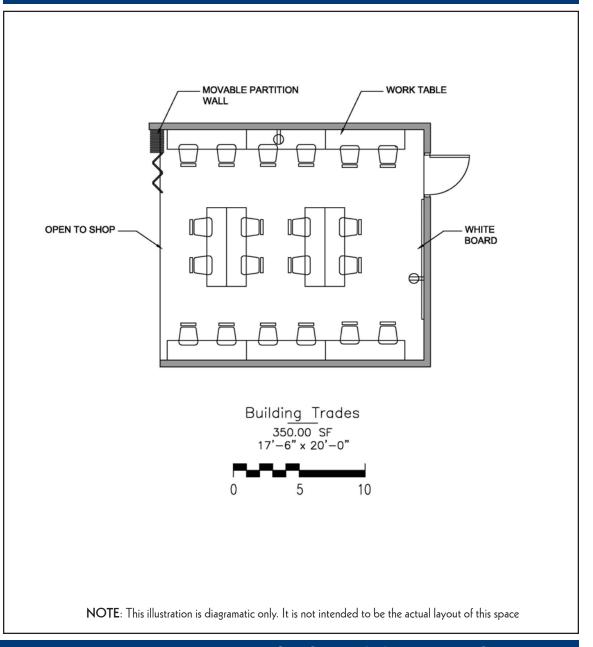
Finishes Floor : VCT

Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc white light Noise Control Level : NC35-40 : 72 deg F +/-Temperature



# **SPACE DESCRIPTION**

Function Storage for Building Trades

Adjacent or near Exterior Access/Welding

Same Floor as Restrooms

Occupants Staff: 1

Visitors: 1
Total: 2

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

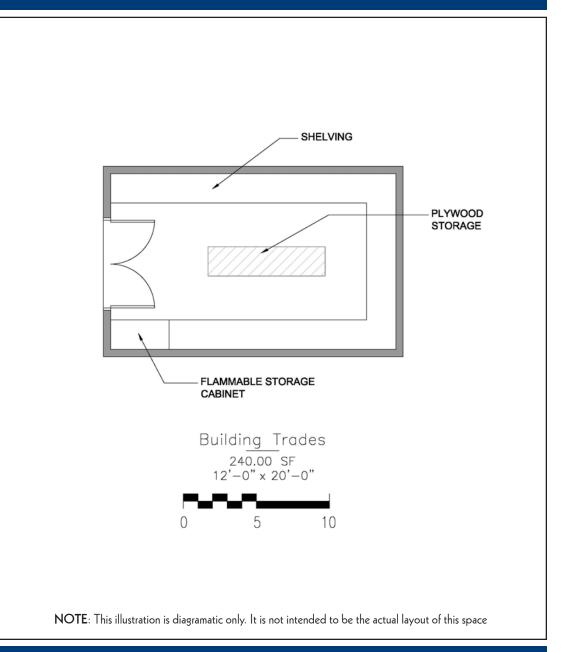
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

: 72 deg F +/-

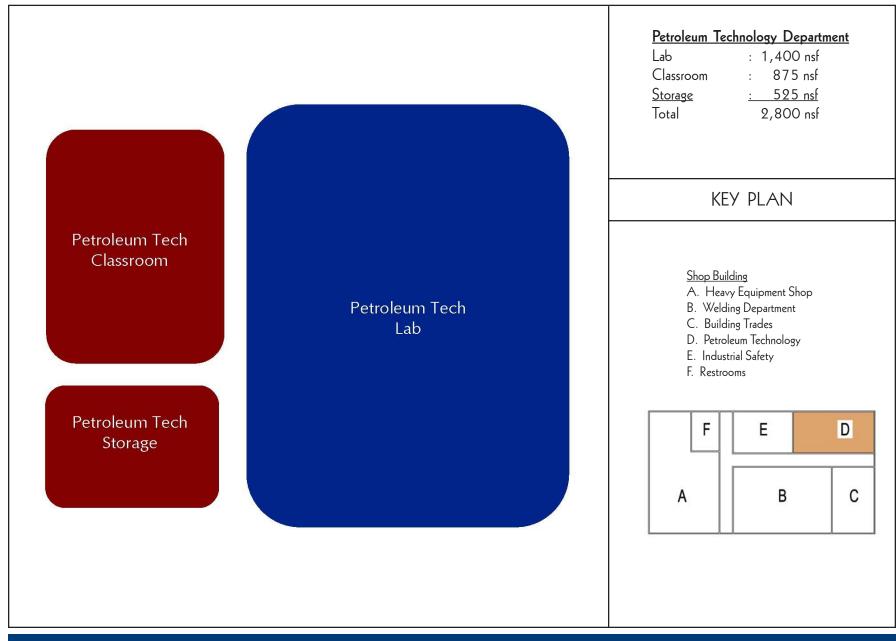
Ceiling height :  $10^{\circ}$  **Lighting Level** : 50fc **Noise Control Level** : NC35-40

Temperature



# 4.12 PETROLEUM TECHNOLOGY DEPARTMENT

# **AFFINITY DIAGRAM**



# **SPACE DESCRIPTION**

Function Laboratory for Petroleum Tech

Adjacent or near Petroleum Tech Class & Storage

Same Floor as Restrooms/Exterior Exit

Occupants Staff: 1

Visitors: 24
Total: 25

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : 1

 Phone
 : 0

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Air Recycle : No

Tables Stainless Steel : 4 (Heavy Duty)

Counter Worksurface : 66 (LF)

Additional Requirements:

240V, 12V, Alternative fire suppression, Exhaust fan, LEL Monitor, Floor to support

10,000 lbs

### **ROOM FINISHES & ENVIRONMENT**

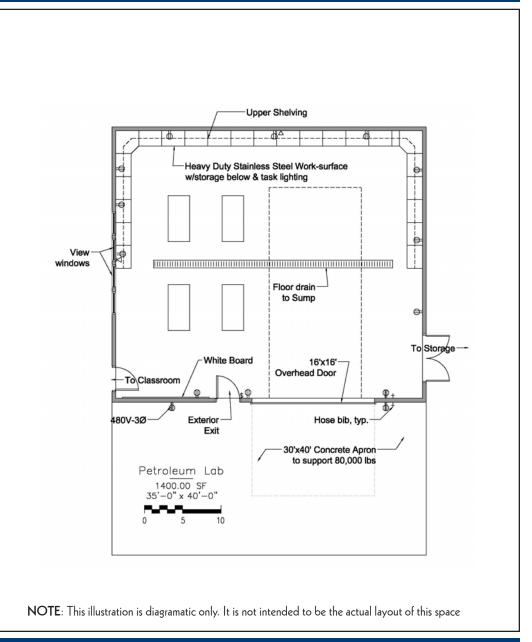
Finishes Floor : Sealed Concrete

Base : Glazed Block
Walls : Glazed Block
Ceiling : Exposed

Ceiling height : 16' min.

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Classroom for Petroleum Tech Adjacent or near Petroleum Tech Lab

Same Floor as Exterior Exit

Occupants Staff: 1

Visitors: 24 Total: 25

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 8

 Data
 : 9

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Air Recycle : No

Tables : 12 (72"x18")

2 (72" x 36")

Additional Requirements:

Gas, Vacuum, Water, Air

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

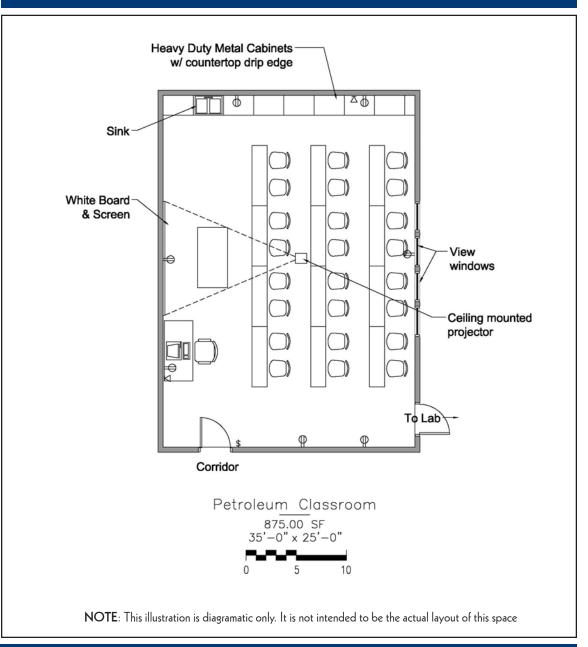
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Storage/Testing area for Petroleum Tech.

Adjacent or near Petroleum Tech Lab & Classrooms

Same Floor as Grade Level
Occupants Staff:

Visitors: 1 Total: 2

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Air Recycle : No

Metal Rack Shelving : 3(51|f) = 1531|f

Additional Requirements:

240V, 12V, Alternative fire suppression, Exhaust fan, LEL Monitor, Floor to support

10,000 lbs

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

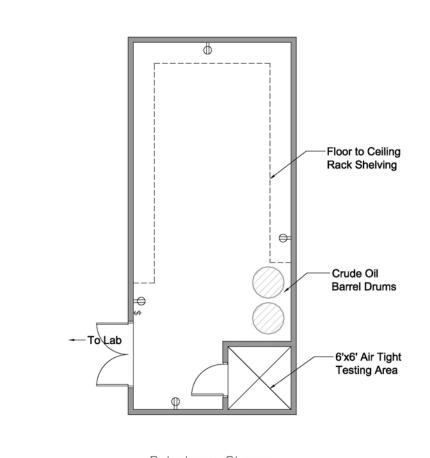
Base : Glazed Block
Walls : Glazed Block
Ceiling : Painted

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Petroleum Storage 525.00 SF 35'-0" x 15'-0"

0 5 10

# 4.13 INDUSTRIAL SAFETY DEPARTMENT

# **AFFINITY DIAGRAM**

Industrial Safety Storage

Industrial Safety Office Industrial Safety Classroom

# **Industrial Safety**

 Classroom/Lab
 : 1,848 nsf

 Storage
 : 128 nsf

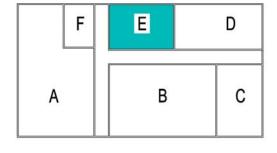
 Office
 : 120 nsf

 Total
 : 2,096 nsf

# KEY PLAN

#### Shop Building

- A. Heavy Equipment Shop
- B. Welding Department
- C. Building Trades
- D. Petroleum Technology
- E. Industrial Safety
- F. Restrooms



# **SPACE DESCRIPTION**

Function Industrial Safety Instruction Area

Adjacent or near IS Storage office Same Floor as Exterior exits

Occupants Staff:

Visitors: 40 Total: 42

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 25

 Data
 : 2

 Phone
 : 2

 Modem
 : 1

 Video
 : 1

Desks : 21

Additional Requirements:

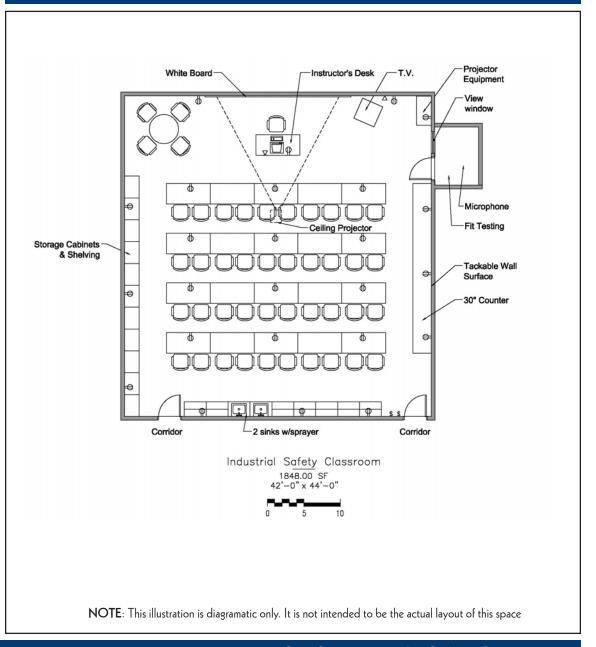
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber
Walls : Painted
Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Industrial Safety Instructor office
Adjacent or near IS Class, Storage
Same Floor as Exterior exits

Occupants Staff:

Visitors: 0
Total: 2

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 2

 Phone
 : 2

 Modem
 : 2

 Video
 : 0

Additional Requirements:

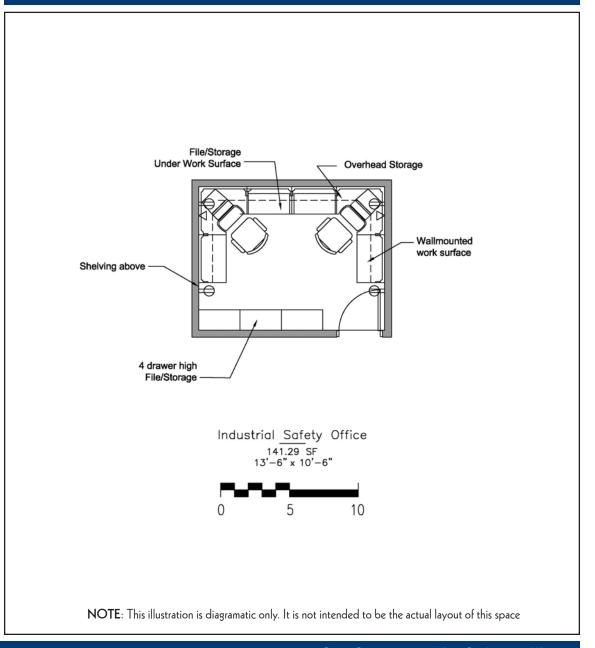
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

Base : Rubber
Walls : Painted
Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Industrial Safety Storage Area
Adjacent or near IS Class, Office
Same Floor as Exterior exits
Occupants Staff: N/A

Visitors: N/A
Total: N/A

# **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 2

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Additional Requirements:

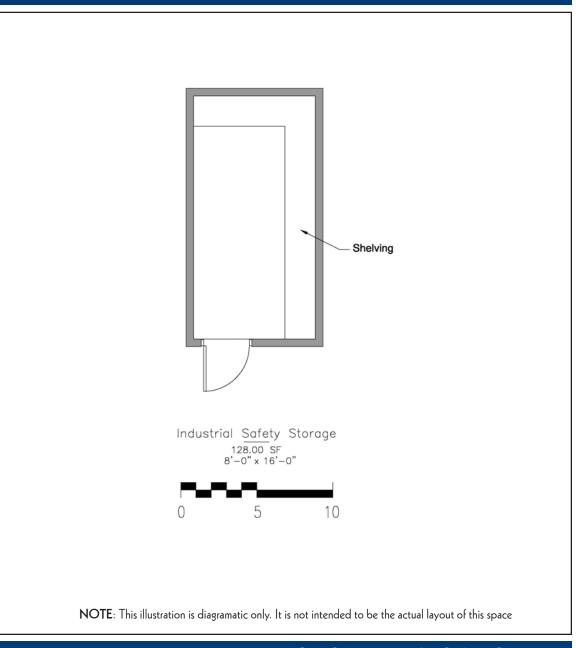
# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber
Walls : Painted
Ceiling : Exposed
Ceiling height : 10'

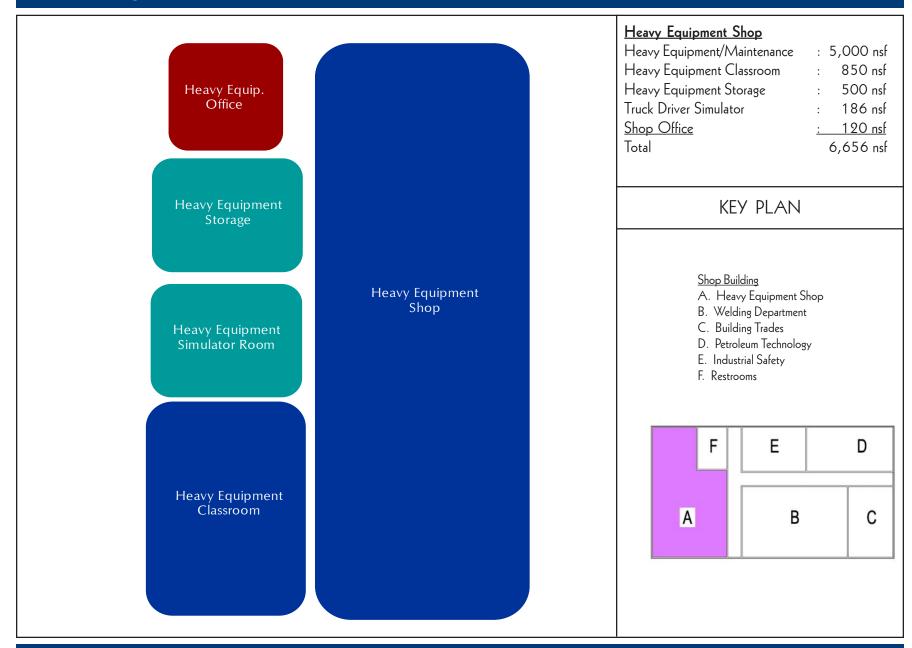
Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 





# **AFFINITY DIAGRAM**



# **SPACE DESCRIPTION**

Function Shop for the Heavy Equip. Department

Adjacent or near H.E. Class, Office & Restrooms

Same Floor as Heavy Equipment Classroom

Occupants Staff: 2

Visitors: 20 Total: 22

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : 0

 Phone
 : 1

 Modem
 : 0

 Video
 : 0

Min. Air Change rate : 8

Min. Ventilation : 15cfm/person

Air Recycle :  $N_0$  Work Surface (LF) : 24

Additional Requirements: Provide Exhaust Fans

#### **ROOM FINISHES & ENVIRONMENT**

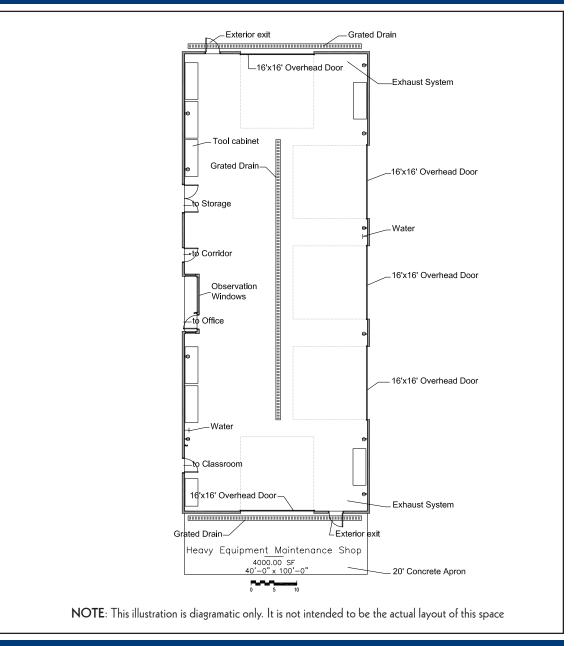
Finishes Floor : Sealed Concrete

Base : Glazed Block

Walls : CMU
Ceiling : Exposed
Ceiling height : 20' min.

Lighting Level : 70fc
Noise Control Level : NC40

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Heavy Equipment Classroom

Adjacent or near Heavy Equipment Shop
Same Floor as Exterior Exit

Occupants Staff: 1

Visitors: 20 Total: 21

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 10

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Tables (72"x18") : 9 Privacy Carrels(38") : 3

Additional Requirements: View window into

shop area

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Carpet

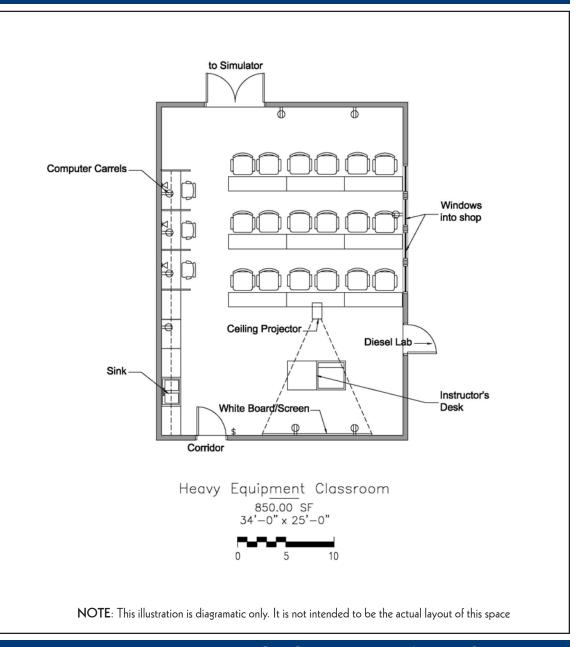
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Storage for the Heavy Equipmet Shop
Adjacent or near Heavy Equipment Shop
Same Floor as Heavy Equipment Classroom

Occupants Staff: 1

Visitors: 1 Total: 2

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 0

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

**Shelving (LF)** : 3(68') = 204lf

Additional Requirements: Metal Doors

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

Base :

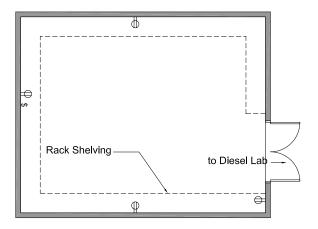
Walls : Painted CMU Ceiling : Exposed

Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**



Heavy Equipment Storage

500.00 SF
20'-0" × 25'-0"



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Truck Driving Simulation

Adjacent or near Diesel Mechanics lab & office Same Floor as Diesel Mechanics Classroom

Occupants Staff: 1

Visitors: 2 Total: 3

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 3

 Data
 : 1

 Phone
 : 0

 Modem
 : 0

 Video
 : 0

Min. Air Change rate : 8

Min. Ventilation : 15cfm/person Air Recycle/Filtration : Yes/60-65%

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

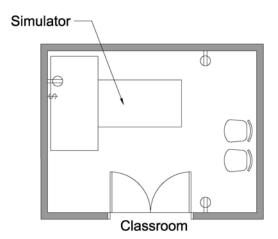
Base : Glazed Concrete
Walls : Painted CMU
Ceiling : Exposed

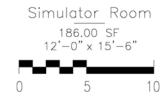
Ceiling height : 10'

Lighting Level : 50fc
Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 

# **ROOM DIAGRAM**





NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **SPACE DESCRIPTION**

Function Office for the Diesel Mechanics Instructor
Adjacent or near Diesel Mech. lab & Simulator
Same Floor as Diesel Mechanics Classroom

Occupants Staff: 1

Visitors: 2 Total: 3

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. Air Change rate : 8

Min. Ventilation : 15cfm/person Air Recycle/Filtration : Yes/60-65%

Work Surface (LF) : 14 Additional Requirements :

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

Base : Rubber Walls : Painted

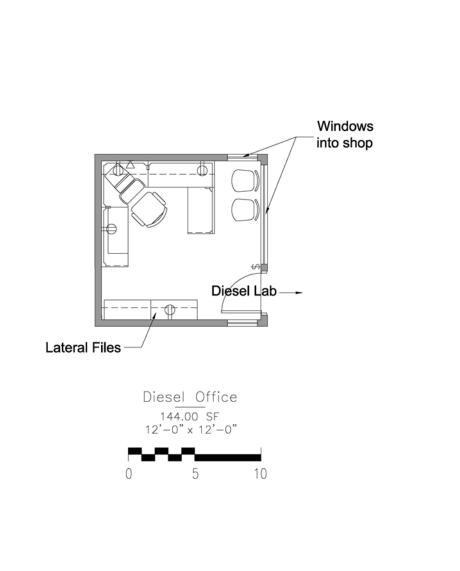
Ceiling : Acoustical Tile

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 

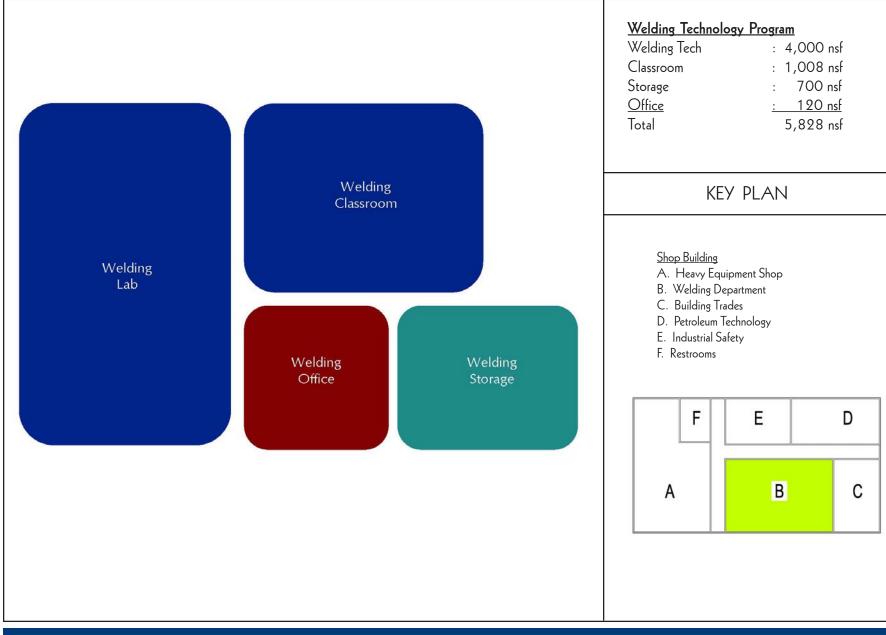
# **ROOM DIAGRAM**



NOTE: This illustration is diagramatic only. It is not intended to be the actual layout of this space

# **4.15 WELDING DEPARTMENT**

# **AFFINITY DIAGRAM**



#### **SPACE DESCRIPTION**

Function Teaching Lab for Welding Technology

Adjacent or near Welding Class, Office & Storage

Same Floor as Diesel Technology Shop

Occupants Staff: 1

Visitors: 24
Total: 25

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: TBD

 Data
 : 1

 Phone
 : 1

 Modem
 : 0

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/person

Humidity : Low Air Recycle : No

Tables (Stainless Steel) : 8 (24"x76")

1 (72"x144")

Additional Requirements: 42 (480/3ph)

outlets

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

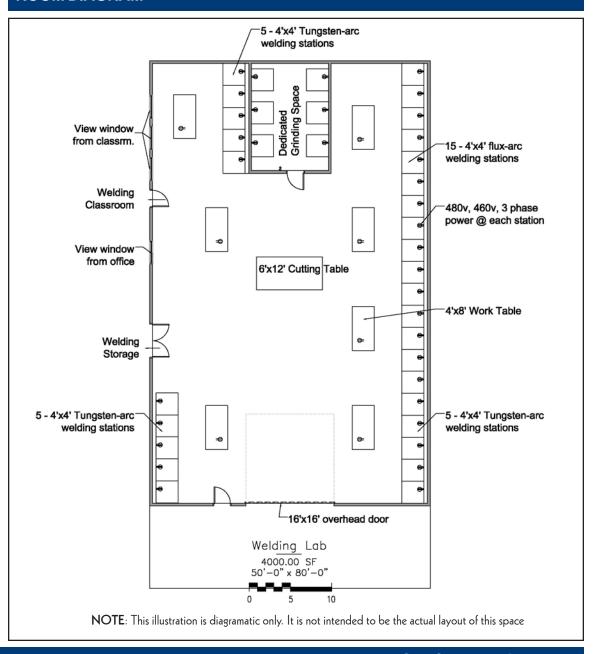
Base : \_

Walls : Glazed Block Ceiling : Exposed

Ceiling height : 10'

Lighting Level : 50fc Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Teaching Class for Welding Technology
Adjacent or near Welding Lab, Office & Storage
Same Floor as Diesel Technology Shop

Occupants Staff: 1

Visitors: 24
Total: 25

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 8

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 1

Min. air change rate : 8

Min. Ventilation : 15 cfm/personAir Recycle/Filtration :  $\frac{\text{Yes}}{60-65\%}$ Tables :  $12 (72 \times 18)$ 

Worksurface (LF) : 20'

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : VCT

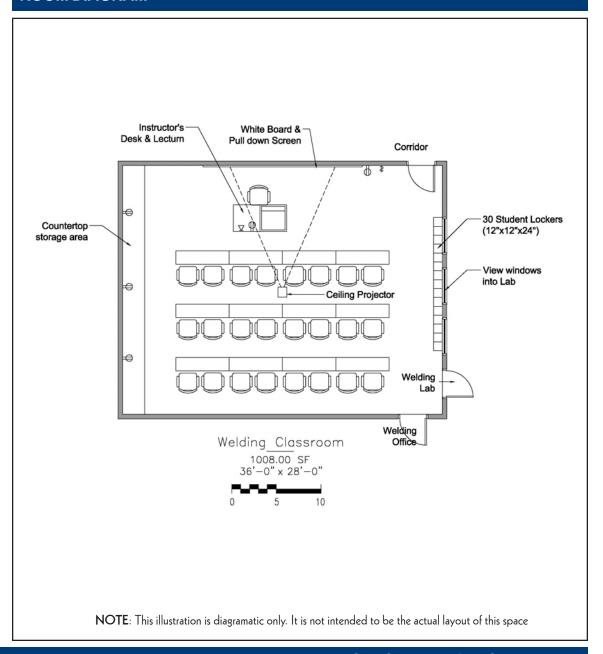
Base : Rubber Walls : Painted

Ceiling : Acoustical Tile

Ceiling height : 10'

Lighting Level : 50fc Noise Control Level : NC35

**Temperature** :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Teaching Lab for Welding Technology

Adjacent or near Welding Class, Office & Storage

Same Floor as Diesel Technology Shop

Occupants Staff: 1

Visitors: 2 Total: 3

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Min. air change rate : 8

Min. Ventilation : 15 cfm/personTables (Stainless Steel) : 8 (24 "x 76 ")

1 (72"x144")

Additional Requirements:

#### **ROOM FINISHES & ENVIRONMENT**

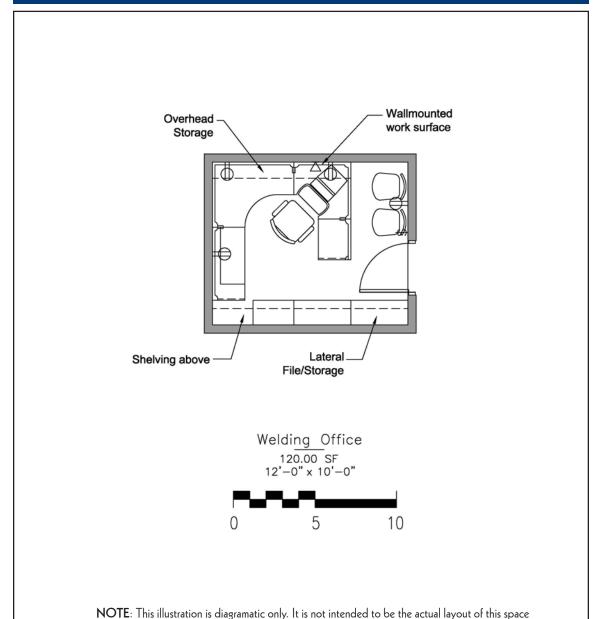
Finishes Floor : VCT

Base : Rubber
Walls : Painted Gyp
Ceiling : Acoustical

Ceiling height : 8'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **SPACE DESCRIPTION**

Function Storage Space for Welding Technology

Adjacent or near Welding lab & Office
Same Floor as Diesel Technology Shop

Occupants Staff:

Visitors: 1
Total: 2

#### **SPECIAL REQUIREMENTS**

Electrical 120V outlets: 4

 Data
 : 1

 Phone
 : 1

 Modem
 : 1

 Video
 : 0

Shelving : 336 LF

Additional Requirements:

# **ROOM FINISHES & ENVIRONMENT**

Finishes Floor : Sealed Concrete

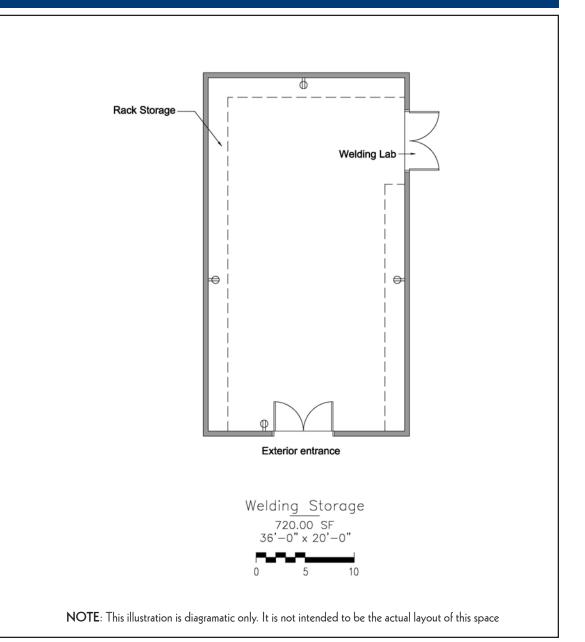
Base : \_

Walls : Glazed Block Ceiling : Exposed

Ceiling height : 12'

Lighting Level : 50fc
Noise Control Level : NC35

Temperature :  $72 \deg F +/-$ 



# **5.0 COST ESTIMATE**

# **5.0 COST ESTIMATE**

#### Assumptions made for this estimate

- 1. This is a preliminary estimate only. Costs are based on square foot costs for similar type new construction and not on detailed quantity takeoffs.
- Site work is assumed to be at the level and type now found on campus. No special site work is included, just normal grass, small planting areas and irrigations.
- 3. Substructure is assumed to have spot and strip footings with foundation wall. Slab-on-grade is assumed to be 4 to 5 inches thick with wire mesh reinforcement. This estimate assumes building footprints of 333' by 100' with a partial second story for the classroom building and 220' by 120' for the shop building.
- 4. Superstrucure is assumed to be steel structure with concrete floors on metal deck.
- 5. Exterior is assumed to be brick with approximately 40% of the exterior wall to be window.
- It is assumed that there will be some type of roofing and waterproofing required at the roof and foundations. Insulation was assumed to be R-19 in the walls and R30 at the roof.
- 7. Interior construction was assumed to be medium grade with interior doors for every 400 sf,, complete with hardware to meet codes.
- 8. Mechanical was estimated knowing that no steam or hot water is available from a campus system.

- Electrical assumed adequate power was available within 400 lineal feet of the building and that no special work would have to be done to connect into the main power line.
- 10. No utility extensions were considered in offsite costs.

#### Cost Estimate Organization

The cost estimate is organized with the DFCM-Capital Budget Request System (CBRS) form followed by a space summary (with preliminary cost figures noted) and then a more detailed summary of costs for both new construction and renovation. Back-up construction costs and furniture and equipment costs follow the cost summary.



UBATC + USU NEW CLASSROOM/SHOP BUILDING - VERNAL, UTAH

No.	SPACE DESCRIPTION	# Occupants	Code Occupants		W	L	Total NSF	<b>FACTOR</b>	GSF	Cost/GSF		Subtotal Cost
ом с	COMPONENT											
C-1	Allied Health Lab	15	45	Т	36	62	2,232	1.30	2,902	\$ 140	\$	406.25
C-2	Allied Health Classroom	30	62	$\Box$	28	44	1,232	1.30	1,602		\$	200,2
C-3	Allied Health Storage	1	2		18	25	450	1.30	585	\$ 85	\$	49,7
C-4	Allied Health Office	1	1	П	10	12	120	1.30	156	\$ 120	\$	18,7
C-5	Allied Health Assistant Office	1	1		8.5	9.5	81	1.30	105	\$ 120	\$	12,5
C-6	Computer Lab (Drafting)	22	26		40	32	1,280	1.30	1,664	\$ 125	\$	208,0
C-7	Drafting Office	1	1		12	12	144	1.30	187	\$ 120	\$	22,4
C-8	Computer Lab - Business - Fixed	28	23		35	33	1,155	1.30	1,502	\$ 135	\$	202,7
C-9	Computer Lab Office	1	1		10	12	120	1.30	156	\$ 125	\$	19,5
C-10	Computer Lab - Business - Open & Lab. Assist.	28	27		41	33.5	1,374	1.30	1,786	\$ 135	\$	241,0
C-11	Computer Lab Office	1	1		10	12	120	1.30	156	\$ 120	\$	18,7
C-12	Computer Lab Storage	1	1		8	16	128	1.30	166	\$ 85	\$	14,1
C-13	Orientation Space	10	10		10	20	200	1.30	260	\$ 125	\$	32,5
C-14	Testing Area - 8 Computer / 8 Regular	10	23		14	33.5	469	1.30	610	\$ 125	\$	76,2
C-15	Information Technology Lab and Classroom	24	42		42	50	2,100	1.30	2,730	\$ 125	\$	341,2
C-16	IT Admin., Server, Storage	1	3		20	30	600	1.30	780	\$ 120	\$	93,6
C-17	Business Office - IT	1	1		12	10	120	1.30	156	\$ 120	\$	18,7
C-18	Custom Fit Classroom	30	52		26	40	1,040	1.30	1,352	\$ 125	\$	169,0
C-19	Custom Fit Storage	1	1		12	15	180	1.30	234	\$ 85	\$	19,8
	Custom Fit Office	1	1		10	12	120	1.30	156	\$ 120	\$	18,7
C-21	Custom Fit Office	1	1		10	12	120	1.30	156	\$ 120	\$	18,7
C-22	Custom Fit Office	1	1		10	12	120	1.30	156	\$ 120	\$	18,7
	Subtotal UBATC - Classrooms	210	327				13,504		17,556	\$ 127	\$	2,221,3
U-1	Distance Learning Studio	60	65	Т	36	36	1,296	1.30	1,685	\$ 145	\$	244,2
	Life Science Lab	24	26	+	36	36	1,296	1.30	1,685	-	\$	269,5
	General Science Lab	24	96	$\Box$	36	36	1,296	1.30	· · · · · · · · · · · · · · · · · · ·	\$ 160	_	269.5
	Chemistry Lab	24	27	$\Box$	34	40	1,360	1.30	1,768		\$	282,8
	Lab Prep & Chemical Storage	1	4	$\vdash$	20	36	720	1.30	936		\$	102,
U-6	Research Lab - Deleted			$\Box$							\$	
U-7	Herbarium	1	6	$\Box$	15	20	300	1.30	390	\$ 140	\$	54,0
	Science & Equipment Storage	1	2	$\Box$	15	20	300	1.30	390	\$ 85	\$	33,
	Biology Storage	1	4	$\Box$	25	30	750	1.30	975	\$ 85	\$	82,
	Faculty Office Area, USU	10	12		10	12	1,200	1.30	1,560			187,9
	Subtotal USU - Classrooms	146	171				8,518		11,073	\$ 138	Ī.	1,527,0

# COST ESTIMATE

No	space description	# Occupants	Code Occupants		W	L	Total NSF	<b>FACTOR</b>	GSF	Cost/GSF		Subtotal Cost
J.	1 Multi-use Classrooms	30	60		30	40	1,200	1.30	1,560	\$ 130	\$	202,80
J-9	2 Multi-use Classrooms	30	60	$\Box$	30	40	1,200	1.30	1,560		_	202,80
J.;	3 Break Room	10	31	$\Box$	25	25	625	1.30	813			97,50
J.,		30	23	$\Box$	39	30	1,170	1.30	1,521		_	273,78
J-!	5 Culinary Arts Classroom - Deleted										\$	-
J-(	6 Culinary Storage	1	2	П	10	39.6	396	1.30	515	\$ 85	\$	43,75
J-7	7 Tiered Classroom	88	80	П	40	40	1,600	1.30	2,080	\$ 140	\$	291,20
J-8	Media Resource and Technology Center	50	102		60	85	5,100	1.30	6,630	\$ 145	\$	961,35
J-9	9 Multi-use Classrooms	30	56	П	28	40	1,120	1.30	1,456	\$ 125	\$	182,00
J-1	0 Multi-use Classrooms - Deleted			П							\$	-
J-1	1 Faculty Room	24	29	П	24	24	576	1.30	749	\$ 120	\$	89,85
	Subtotal Joint Shared Spaces - Classroom	293	443	П			12,987		16,883	\$ 139	·	2,345,04
_	-1 Restroom-female ( 6 w/c's)	0	0	Ш	20	12	240	1.30	312		_	43,68
-	-2 Restroom-female ( 6 w/c's)	0	0	$\sqcup$	20	12	240	1.30	312		_	43,68
	Restroom-male ( 6 w/c's)	0	0	$\sqcup$	20	12	240	1.30	312		_	43,68
	Restroom-male ( 6 w/c's)	0	0	$\sqcup$	20	12	240	1.30	312		_	43,68
_	-5 Unisex Restroom	0	0	$\vdash$	5	5	25	1.30	33	\$ 140		4,55
	-6 Student Commons	0	0	$\sqcup$	20	20	400	1.30	520	\$ 125	_	65,00
-	-7 Mechanical	0	0	$\sqcup$	15	20	300	1.30	390	\$ 85		33,15
	-8 Maintenance - Storage	0	0	$\vdash$	8	10	80	1.30	104	\$ 85		8,84
	9 Electrical Room	0	0	$\vdash$	12	8	96	1.30	125			10,60
_	10 IT Room	0	0	$\vdash$	10	8	80	1.30	104		_	8,84
-	11 Telephone Room	0	0	$\sqcup$	8	8	64	1.30	83		_	7,07
CS-	12 Maintenance - Janitor	0	0	$\vdash$	4	6	24	1.30	31	\$ 85	\$	2,65
	Subtotal Support Spaces - Classroom Component						2,029		2,638			315,43
	Subtotal - Classroom Component	649	941				35,009		48,150			6,408,9
	Construct Inflation at .75% / month - Construction begi	ns March 2007 = 19 m	onths							14.3%		913,2
	Construction in Vernal - 3% increase									3.0%		192,2
	Total Construction Cost for Classroom Component				_							7,514,49

Soft Costs		Additional Project Cost Items	
	SC-1	Soft Cost per CBE at 40.27 / sq.ft	\$ 1,938,989

Construction Cost per Sq.ft	\$ 156.07				
Additional Project Costs	\$ 1,938,989				
Total Project Costs - Classroom Component	9,453,485				
Project Cost per Sq.ft	\$ 196.34				

# **COST ESTIMATE**

195.15

73%

\$

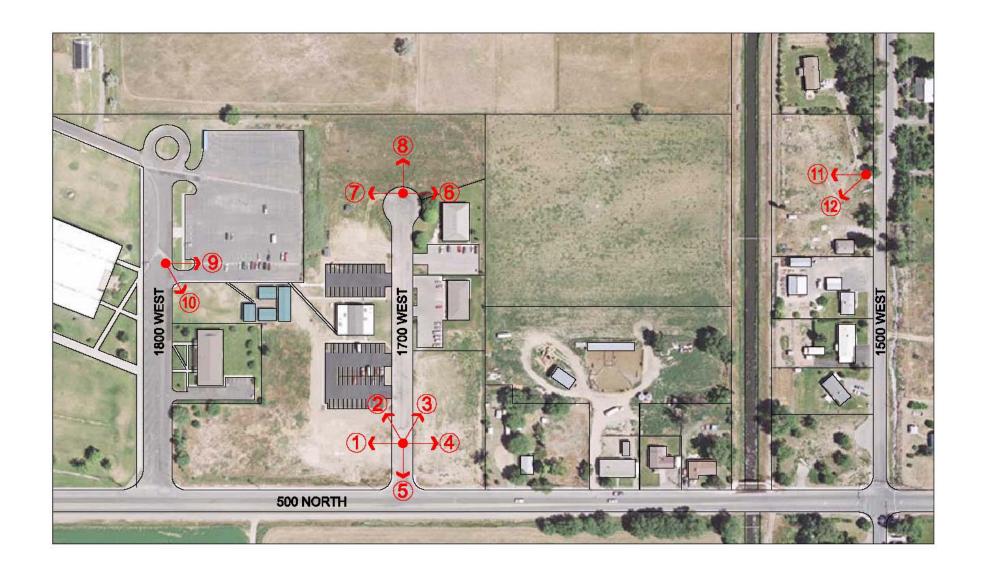
	No.	SPACE DESCRIPTION	# Occupants	Code Occupants	W	L	Total NSF	<b>FACTOR</b>	GSF	Cost/GSF		Subtotal Cost
ON.	иРОI	NENT										
	S-1	Building Trades	20	36	30	60	1,800	1.30	2,340	\$ 140	\$	327,6
	S-2	Petroleum Technology Lab	25	28	35	40	1,400	1.30	1,820	\$ 140	\$	254,8
	S-3	Petroleum Tech Classroom	24	44	25	35	875	1.30	1,138	\$ 125	\$	142,1
		Petroleum Tech. Storage	0	0	15	35	525	1.30	683			58,0
		Industrial Safety	40	92	42	44	1,848	1.30	2,402			300,3
L	S-6	Industrial Safety Storage	0	0	8	16	128	1.30	166	\$ 85	\$	14,1
	S-7	Industrial Safety Office	2	1	10	12	120	1.30	156		\$	18,7
	S-8	Welding Technology Program	25	80	50	80	4,000	1.30	5,200	\$ 140		728,0
		Welding Classroom	25	50	28	36	1,008	1.30	1,310		\$	163,8
		Welding Storage	0	0	20	35	700	1.30	910	\$ 85	\$	77,3
	S-11	Welding Office	1	1	10	12	120	1.30	156	\$ 120	\$	18,7
	S-12	Heavy Equipment and Maintenance Shop	20	100	50	100	5,000	1.30	6,500	\$ 140	\$	910,0
	S-13	Heavy Equipment Shop Classroom	20	43	25	34	850	1.30	1,105	\$ 125	\$	138,1
	S-14	Heavy Equipment Storage	0	0	20	25	500	1.30	650	\$ 85	\$	55,2
	S-15	Truck Driver Simulator	1	9	12	15.5	186	1.30	242	\$ 145	\$	35,0
	S-16	Diesel Shop Office	1	1	10	12	120	1.30	156	\$ 120	\$	18,7
		Subtotal UBATC - Shops	204	486			19,180		24,934	\$ 131		3,260,7
	CC 1	Restroom-female ( 5 w/c's)	0	0	18	12	216	1.30	281	\$ 140	\$	39,3
_			0	0		_			281			
		Restroom-male ( 5 w/c's)  Mechanical	0	0	18	12	216	1.30	195	\$ 140 \$ 85		39,3
		Electrical Room	0	0	8	15	150	1.30	83		_	16,5 7,0
_		IT Room	0	0	6	8	48	1.30	62	\$ 85		5,3
		Telephone Room	0	0	6	8	48	1.30	62		_	5,3
		Maintenance - Janitor	0	0	4	6	24	1.30	31		_	2,6
- 1-	33-1			0	4	0		1.30		2 03	1	
$\vdash$		Subtotal Support Spaces - Shops	-			+	766		996		-	115,5
F												
		Grand Total - Shop Component	204	486			19,180		25,930			3,376,3
_		Construct Inflation at .75% / month - Construction be	gins March 2007 = 19 m	onths						14.3%		481,1
		Construction in Vernal - 3% increase								3.0%		101,2
		Total Construction Cost for Shop Component										3,958,7
								Construction	Cost per Sq.ft		\$	130
		Additional Project Cost Items						Construction	Cost per 5q.it		Ψ	130
S	C-1	Soft Cost per CBE at 40.27 / sq.ft	\$ 1,044,193	]				Additional	Project Costs		\$	1,044,1
-								Total Projec	t Costs - Shop Component			5,002,9
									·			
$\vdash$				1				Project Cost	per Sq.ft		\$	192
								TILC	. (D		<b>*</b>	44.454.4
L				1				Total Co	ost of Project	Lan Builde D	\$	14,456,4
			Classroom / Shop Building Project Cost Soft Costs \$39.38 / GSF						_			
									39.38 / GSF		\$	2,983,1
								Total GSF				74,0
								Total NSF				54,1

Project Cost/SF

Efficiency

# **6.0 APPENDICES**

# **6.1 SITE PHOTOGRAPHS**



# **APPENDIX A - SITE PHOTOGRAPHS**



1) Looking West from 1700 West



(3) Looking North East from 1700 West



(2) Looking North West from 1700 West



4 ) Looking East from 1700 West

# **APPENDIX A - SITE PHOTOGRAPHS**



(5) Looking South from 1700 West



7 ) Looking West from Cul-de-sac



(6) Looking East from Cul-de-sac



8 ) Looking North from Cul-de-sac

# **APPENDIX A - SITE PHOTOGRAPHS**



(9) Looking South East looking at Mobile Classrooms



(11) Looking West from 1500 West

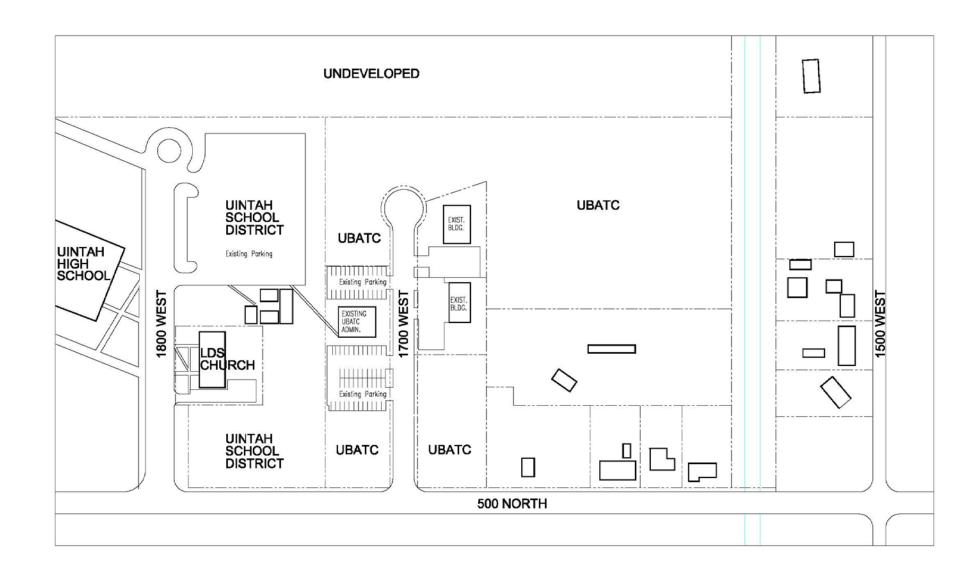


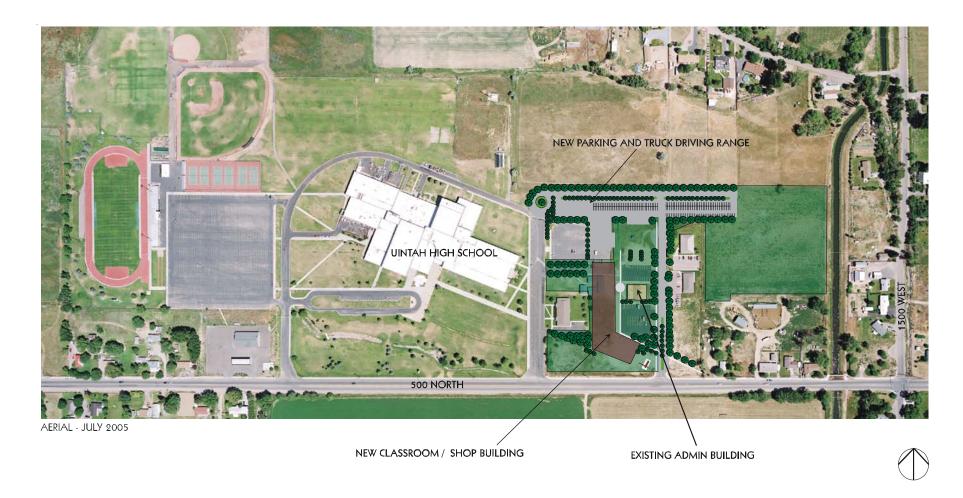
10) Looking South East looking at the Seminary Building



12) Looking South West from 1500 West

# **6.2 MASTER PLAN**





# UBATC+USU CLASSROOM / SHOP BUILDING - VERNAL, UTAH MASTER PLAN



